Prevalence of trypanosomes and *Sodalis* in wild populations of tsetse flies: Impact on SIT programmes for tsetse eradication

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library(ggplot2)

## Warning: package 'ggplot2' was built under R version 4.0.5

library(lattice)  
library(gcookbook)  
library(ggfortify)  
library(datasets)  
library(MASS)  
library(survival)  
library(rmarkdown)  
library(knitr)  
library(coxme)

## Loading required package: bdsmatrix

##   
## Attaching package: 'bdsmatrix'

## The following object is masked from 'package:base':  
##   
## backsolve

library(lme4)

## Loading required package: Matrix

library(nlme)

##   
## Attaching package: 'nlme'

## The following object is masked from 'package:lme4':  
##   
## lmList

library(tidyverse)

## Warning: package 'tidyverse' was built under R version 4.0.5

## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --

## v tibble 3.1.1 v dplyr 1.0.5  
## v tidyr 1.1.3 v stringr 1.4.0  
## v readr 1.4.0 v forcats 0.5.1  
## v purrr 0.3.4

## Warning: package 'tibble' was built under R version 4.0.5

## Warning: package 'dplyr' was built under R version 4.0.5

## -- Conflicts ------------------------------------------ tidyverse\_conflicts() --  
## x dplyr::collapse() masks nlme::collapse()  
## x tidyr::expand() masks Matrix::expand()  
## x dplyr::filter() masks stats::filter()  
## x dplyr::lag() masks stats::lag()  
## x tidyr::pack() masks Matrix::pack()  
## x dplyr::select() masks MASS::select()  
## x tidyr::unpack() masks Matrix::unpack()

library(gapminder)  
library(rcompanion)  
library(FSA)

## ## FSA v0.8.32. See citation('FSA') if used in publication.  
## ## Run fishR() for related website and fishR('IFAR') for related book.

library(stats)  
library(RCA)

## Loading required package: igraph

##   
## Attaching package: 'igraph'

## The following objects are masked from 'package:dplyr':  
##   
## as\_data\_frame, groups, union

## The following objects are masked from 'package:purrr':  
##   
## compose, simplify

## The following object is masked from 'package:tidyr':  
##   
## crossing

## The following object is masked from 'package:tibble':  
##   
## as\_data\_frame

## The following objects are masked from 'package:stats':  
##   
## decompose, spectrum

## The following object is masked from 'package:base':  
##   
## union

## Loading required package: gplots

## Registered S3 method overwritten by 'gplots':  
## method from   
## reorder.factor DescTools

##   
## Attaching package: 'gplots'

## The following object is masked from 'package:stats':  
##   
## lowess

library(broom)

## Warning: package 'broom' was built under R version 4.0.5

library(sp)  
library(MuMIn)

## Registered S3 methods overwritten by 'MuMIn':  
## method from   
## formula.coxme coxme  
## logLik.coxme coxme  
## logLik.lmekin coxme

library(ggpubr)

## Registered S3 methods overwritten by 'car':  
## method from  
## influence.merMod lme4  
## cooks.distance.influence.merMod lme4  
## dfbeta.influence.merMod lme4  
## dfbetas.influence.merMod lme4

library(AICcmodavg)

##   
## Attaching package: 'AICcmodavg'

## The following objects are masked from 'package:MuMIn':  
##   
## AICc, DIC, importance

## The following object is masked from 'package:lme4':  
##   
## checkConv

library(car)

## Warning: package 'car' was built under R version 4.0.5

## Loading required package: carData

##   
## Attaching package: 'car'

## The following object is masked from 'package:FSA':  
##   
## bootCase

## The following object is masked from 'package:dplyr':  
##   
## recode

## The following object is masked from 'package:purrr':  
##   
## some

library(ggthemes)

## Warning: package 'ggthemes' was built under R version 4.0.5

## prepare the data

data=read.csv("rawdata\_statistic\_sod\_tryp\_bio2.csv")  
str(data)

## 'data.frame': 157 obs. of 18 variables:  
## $ Country : chr "ETH" "BKF" "BKF" "SEN" ...  
## $ Localisation: chr "Arba minch, nech SAFr" "Comoe" "Comoe" "Pout" ...  
## $ Species : chr "Gp" "Gt" "Gt" "Gpg" ...  
## $ Sex : chr "NI" "F" "M" "NI" ...  
## $ Sample : int 1 2 3 4 5 6 7 8 9 10 ...  
## $ Prev\_Sod : num 20.5 0 0 0 42.6 ...  
## $ Prev\_Tspp : num 20.04 16.54 15 7.04 88.72 ...  
## $ Prev\_Tc : num 6.1 1.1 3.64 1.51 21.54 ...  
## $ Prev\_Tv : num 0.65 13.24 11.36 2.01 15.38 ...  
## $ Prev\_Tz : num 1.09 0.37 0 0.5 0.51 1.03 0 0.68 0.68 0 ...  
## $ Prev\_Tsg : num 10.46 0 0 3.02 26.15 ...  
## $ Prev\_TcTv : num 0 0.74 0 0 6.67 1.03 0 0 0 0 ...  
## $ Prev\_TcTz : num 0 1.1 0 0 1.54 0.51 0 0 0 0.76 ...  
## $ Prev\_TcTsg : num 0.65 0 0 0 15.9 0.51 0 7.53 0.68 0 ...  
## $ Prev\_TvTz : num 0 0 0 0 1.03 0 0 0 0 0 ...  
## $ Prev\_TvTsg : num 0.44 0 0 0 0 0 0 0 0.68 0 ...  
## $ Prev\_TzTsg : num 0.65 0 0 0 0 1.03 0 0 0.68 0 ...  
## $ Prev\_TcTvTz : num 0 0 0 0 0 0 0 0 0 0 ...

attach(data)  
head(data)

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc  
## 1 ETH Arba minch, nech SAFr Gp NI 1 20.48 20.04 6.10  
## 2 BKF Comoe Gt F 2 0.00 16.54 1.10  
## 3 BKF Comoe Gt M 3 0.00 15.00 3.64  
## 4 SEN Pout Gpg NI 4 0.00 7.04 1.51  
## 5 KEN Katotoi Gp NI 5 42.56 88.72 21.54  
## 6 KEN Mwea Gp NI 6 3.08 19.49 7.18  
## Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 1 0.65 1.09 10.46 0.00 0.00 0.65 0.00 0.44  
## 2 13.24 0.37 0.00 0.74 1.10 0.00 0.00 0.00  
## 3 11.36 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 4 2.01 0.50 3.02 0.00 0.00 0.00 0.00 0.00  
## 5 15.38 0.51 26.15 6.67 1.54 15.90 1.03 0.00  
## 6 0.51 1.03 7.69 1.03 0.51 0.51 0.00 0.00  
## Prev\_TzTsg Prev\_TcTvTz  
## 1 0.65 0  
## 2 0.00 0  
## 3 0.00 0  
## 4 0.00 0  
## 5 0.00 0  
## 6 1.03 0

data=na.omit(data)  
data

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp  
## 1 ETH Arba minch, nech SAFr Gp NI 1 20.48 20.04  
## 2 BKF Comoe Gt F 2 0.00 16.54  
## 3 BKF Comoe Gt M 3 0.00 15.00  
## 4 SEN Pout Gpg NI 4 0.00 7.04  
## 5 KEN Katotoi Gp NI 5 42.56 88.72  
## 6 KEN Mwea Gp NI 6 3.08 19.49  
## 7 SAF Phinda Gb NI 7 4.12 0.00  
## 8 ZAM Mfuwe Gp NI 8 2.05 45.21  
## 9 URT URTzania Gp NI 9 78.77 19.86  
## 10 BKF Comoe Gmsm F 10 0.00 9.16  
## 11 BKF Folonzo Gt F 11 0.00 18.87  
## 12 BKF Folonzo Gpg F 12 0.00 7.55  
## 13 BKF Folonzo Gpg M 13 1.89 16.04  
## 14 BKF Folonzo Gt M 14 0.00 32.63  
## 15 GUI Kangoliya Gpg F 15 95.74 0.00  
## 16 UGA Buvuma island Gff NI 16 4.26 10.64  
## 17 KEN Kari Gp NI 17 89.36 2.13  
## 18 SEN Kayar Gpg NI 18 0.00 1.14  
## 19 KEN Koibos Gp NI 19 0.00 71.59  
## 20 KEN Meru nat. parc Gp NI 20 22.99 70.11  
## 21 KEN Kari Gmm NI 21 63.53 2.35  
## 22 URT MaSAFng-URTga Gmm NI 22 76.54 53.09  
## 23 KEN Ruma nat. parc Gp NI 23 26.25 17.50  
## 24 GHA Walewale Gt M 24 0.00 53.85  
## 25 BKF Moussodougou Gpg F 25 0.00 44.87  
## 26 ZIM Makuti Gmm NI 26 26.92 91.03  
## 27 SAF False Bay Park Ga NI 27 0.00 2.60  
## 28 BKF Comoe Gmsm M 28 0.00 10.67  
## 29 BKF Folonzo Gmsm M 29 0.00 40.00  
## 30 BKF Comoe Gpg F 30 0.00 2.82  
## 31 URT MaSAFng-URTga Gp NI 31 66.20 73.24  
## 32 BKF Kartasso Gpg F 32 0.00 0.00  
## 33 BKF Kartasso Gpg M 33 0.00 0.00  
## 34 SEN DiackSAFo Peulh Gpg NI 34 0.00 7.69  
## 35 BKF Moussodougou Gpg M 35 0.00 21.88  
## 37 BKF Comoe Gmed M 37 6.56 24.59  
## 38 KEN Emsos Gp NI 38 0.00 93.33  
## 39 BKF Folonzo Gmsm F 39 1.69 20.34  
## 40 MLI Bani Gpg F 40 0.00 1.72  
## 41 SAF SAFint Lucia Ga NI 41 0.00 38.60  
## 42 UGA Budaka Gp NI 42 94.55 7.27  
## 43 GHA Walewale Gt F 43 0.00 66.04  
## 44 BKF Arly Gt F 44 0.00 1.89  
## 45 BKF Kampty Gpg F 45 0.00 90.57  
## 46 SAF Lower Mkhuze Ga NI 46 0.00 43.40  
## 47 BKF Comoe Gpg M 47 0.00 1.92  
## 48 MLI SEN Gpg M 48 0.00 7.69  
## 49 KEN Ikapolok Gff NI 49 39.22 37.25  
## 50 SAF Hluhluwe Gb NI 50 0.00 32.00  
## 51 SAF North eastern KwaZulu-Natal Gb NI 51 0.00 4.00  
## 52 MOZ Reserva Especial de Maputo Gb NI 52 14.00 6.00  
## 53 MOZ Reserva Especial de Maputo Ga NI 53 0.00 10.00  
## 54 BKF Bama Gpg F 54 0.00 0.00  
## 55 BKF Arly Gt M 55 0.00 0.00  
## 56 SEN Tambacounda Gpg F 56 0.00 41.46  
## 57 SEN Tambacounda Gpg M 57 0.00 71.79  
## 58 SEN SebikoURTe Gpg NI 58 0.00 5.13  
## 59 SAF North eastern KwaZulu-Natal Ga NI 59 5.13 5.13  
## 60 ZIM Makuti Gp NI 60 15.79 86.84  
## 61 KEN Obekai Gff NI 61 0.00 5.26  
## 62 MLI SEN Gpg F 62 0.00 0.00  
## 63 ZAI ZAI Gpp NI 63 11.43 2.86  
## 64 BKF Bama Gpg M 64 0.00 0.00  
## 65 MLI Banco Gpg F 65 0.00 20.59  
## 66 BKF Dedougou Gpg F 66 0.00 52.94  
## 67 MLI Sikasso Gpg F 67 0.00 6.06  
## 68 BKF Comoe Gmed F 68 12.12 51.52  
## 69 GHA MorURTi Gt M 69 0.00 50.00  
## 70 BKF Sissili Gt M 70 0.00 25.00  
## 71 GUI Kangoliya Gpg M 71 0.00 0.00  
## 72 BKF Folonzo Gmed F 72 0.00 50.00  
## 73 BKF Folonzo Gmed M 73 0.00 46.67  
## 74 SAF SAFint Lucia Gb NI 74 0.00 43.33  
## 75 SWA Mlawula Nature Reserve Ga NI 75 0.00 0.00  
## 76 URT Uguja island Ga NI 76 6.67 10.00  
## 77 GUI Mini Gpg F 77 0.00 3.45  
## 78 SEN Hann Gpg NI 78 0.00 0.00  
## 79 UGA Omugo Gp NI 79 100.00 0.00  
## 80 BKF Kampty Gpg M 80 0.00 80.77  
## 81 ZIM Mushumb Gp NI 81 3.85 19.23  
## 82 GUI Kifala Gpg M 82 0.00 0.00  
## 83 MLI Sikasso Gpg M 83 0.00 0.00  
## 84 MLI SS Gpg F 84 0.00 4.00  
## 85 UGA Lira Gp NI 85 0.00 16.00  
## 86 BKF Kenedougou Gpg F 86 0.00 0.00  
## 87 MLI SS Gpg M 87 0.00 0.00  
## 88 BKF Dedougou Gpg M 88 0.00 69.57  
## 89 GUI Bafing Gpg F 89 0.00 5.00  
## 90 KEN Kiria Gp NI 90 0.00 80.00  
## 91 BKF Kampty Gpg NI 91 0.00 84.21  
## 92 GUI Tinkisso Gpg M 92 0.00 5.56  
## 93 ZIM Kemukura Gmm NI 93 22.22 5.56  
## 94 BKF Kenedougou Gpg M 94 0.00 0.00  
## 95 GHA Bougouhiya Gt F 95 0.00 18.75  
## 96 GUI Dekonkore Gpg F 96 0.00 6.25  
## 97 GUI Mini Gpg M 97 0.00 0.00  
## 98 SEN Fleuve Gambie Gpg M 98 0.00 43.75  
## 99 BKF Sissili Gt F 99 0.00 13.33  
## 100 ZIM Rukomeshi Gmm NI 100 20.00 0.00  
## 101 KEN Mwea nat. parc Gp NI 101 0.00 13.33  
## 102 GUI Bafing Gpg M 102 0.00 0.00  
## 103 GUI Tinkisso Gpg F 103 0.00 7.69  
## 104 BKF Bouroum bouroum Gpg F 104 0.00 92.31  
## 105 ZIM Mukondore Gmm NI 105 23.08 7.69  
## 106 GUI Karifale Gpg M 106 0.00 8.33  
## 107 GUI Lemonako Gpg F 107 0.00 0.00  
## 108 BKF KouriGUIon Gpg F 108 0.00 50.00  
## 109 MLI Bani Gpg M 109 0.00 0.00  
## 110 MLI Sybi Gpg F 110 0.00 0.00  
## 111 MLI Sybi Gpg M 111 0.00 0.00  
## 112 GHA MorURTi Gt F 112 0.00 66.67  
## 113 SEN Fleueve G Gpg F 113 0.00 11.11  
## 114 BKF KouriGUIon Gpg NI 114 0.00 22.22  
## 115 ZIM M. chiuyi Gmm NI 115 11.11 0.00  
## 116 GHA Fumbissi Gt F 116 0.00 100.00  
## 117 GUI Lemonako Gpg M 117 0.00 0.00  
## 118 UGA Moyo Gp NI 118 87.50 12.50  
## 119 SEN Diaguiri Gpg F 119 0.00 0.00  
## 120 MLI Banco Gpg M 120 0.00 28.57  
## 121 MLI Baoule Gpg F 121 0.00 42.86  
## 122 MLI Baoule Gpg M 122 0.00 42.86  
## 123 MLI Bougouni Gpg M 123 0.00 0.00  
## 124 BKF Lorepeni Gpg F 124 0.00 71.43  
## 125 GHA Fumbissi Gt M 125 0.00 100.00  
## 126 GHA Grogro Gt M 126 0.00 100.00  
## 127 SEN MousSAFlla Gpg M 127 0.00 0.00  
## 128 MLI Baguineda Gpg F 128 0.00 16.67  
## 129 MLI Bougouni Gpg F 129 0.00 0.00  
## 130 MLI Kita Gpg M 130 0.00 16.67  
## 131 ZIM Mushumb Gmm NI 131 0.00 33.33  
## 132 URT Zanzibar Ga NI 132 16.67 0.00  
## 133 GHA Grogro Gt F 133 0.00 100.00  
## 134 GHA Kumpole Gt F 134 0.00 100.00  
## 135 GHA Sissili Bidge Gt F 135 0.00 100.00  
## 136 GUI Kifala Gpg F 136 0.00 0.00  
## 137 BKF Bouroum bouroum Gpg M 137 0.00 80.00  
## 138 SEN Fleuve Gambie Gpg F 138 0.00 25.00  
## 139 ZIM Rukomeshi Gp NI 139 0.00 0.00  
## 140 ZIM Gokwe Gp NI 140 0.00 0.00  
## 141 URT Jozani Ga NI 141 0.00 25.00  
## 142 GHA Bougouhiya Gt M 142 0.00 0.00  
## 143 SEN Niokolo Gpg M 143 0.00 0.00  
## 144 BKF Sissili Gmsm M 144 0.00 0.00  
## 145 BKF Lorepeni Gpg M 145 0.00 100.00  
## 146 BKF KouriGUIon Gpg M 146 0.00 66.67  
## 147 BKF Ouarkoye Gpg M 147 0.00 100.00  
## 148 GHA Kumpole Gt M 148 0.00 100.00  
## 149 GHA Psikp\_ Gt M 149 0.00 100.00  
## 150 SEN Diaguiri Gpg M 150 0.00 50.00  
## 151 BKF Ouarkoye Gpg F 151 0.00 100.00  
## 152 GHA Kandiaga Gt M 152 0.00 100.00  
## 153 GHA Sissili Bidge Gt M 153 0.00 100.00  
## 154 GHA Nabogo Gt F 154 0.00 0.00  
## 155 GHA Volta Blanche Gt F 155 0.00 0.00  
## 156 GUI Karifale Gpg F 156 0.00 0.00  
## 157 SEN Mako Gpg M 157 0.00 100.00  
## Prev\_Tc Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 1 6.10 0.65 1.09 10.46 0.00 0.00 0.65 0.00  
## 2 1.10 13.24 0.37 0.00 0.74 1.10 0.00 0.00  
## 3 3.64 11.36 0.00 0.00 0.00 0.00 0.00 0.00  
## 4 1.51 2.01 0.50 3.02 0.00 0.00 0.00 0.00  
## 5 21.54 15.38 0.51 26.15 6.67 1.54 15.90 1.03  
## 6 7.18 0.51 1.03 7.69 1.03 0.51 0.51 0.00  
## 7 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 8 1.37 0.68 0.68 34.93 0.00 0.00 7.53 0.00  
## 9 6.16 2.74 0.68 8.22 0.00 0.00 0.68 0.00  
## 10 5.34 3.05 0.00 0.00 0.00 0.76 0.00 0.00  
## 11 1.89 12.26 1.89 0.00 1.89 0.94 0.00 0.00  
## 12 0.94 2.83 1.89 0.00 0.00 0.00 0.00 1.89  
## 13 0.00 5.66 5.66 0.00 0.00 1.89 0.00 2.83  
## 14 2.11 27.37 1.05 0.00 0.00 1.05 0.00 1.05  
## 15 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 16 3.19 2.13 1.06 3.19 0.00 0.00 1.06 0.00  
## 17 1.06 0.00 1.06 0.00 0.00 0.00 0.00 0.00  
## 18 0.00 0.00 0.00 1.14 0.00 0.00 0.00 0.00  
## 19 15.91 9.09 0.00 28.41 0.00 0.00 15.91 0.00  
## 20 29.89 4.60 0.00 25.29 0.00 0.00 10.34 0.00  
## 21 2.35 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 22 18.52 1.23 1.23 18.52 0.00 0.00 6.17 0.00  
## 23 10.00 2.50 2.50 0.00 1.25 0.00 0.00 0.00  
## 24 3.85 12.82 8.97 0.00 0.00 10.26 0.00 14.10  
## 25 0.00 20.51 12.82 0.00 0.00 0.00 0.00 11.54  
## 26 11.54 0.00 2.56 69.23 0.00 0.00 7.69 0.00  
## 27 2.60 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 28 5.33 2.67 1.33 0.00 0.00 1.33 0.00 0.00  
## 29 5.33 34.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 30 1.41 1.41 0.00 0.00 0.00 0.00 0.00 0.00  
## 31 33.80 0.00 0.00 14.08 0.00 1.41 21.13 1.41  
## 32 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 33 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 34 0.00 1.54 1.54 4.62 0.00 0.00 0.00 0.00  
## 35 0.00 6.25 15.63 0.00 0.00 0.00 0.00 0.00  
## 37 6.56 13.11 4.92 0.00 0.00 0.00 0.00 0.00  
## 38 15.00 8.33 0.00 58.33 1.67 0.00 10.00 0.00  
## 39 5.08 11.86 1.69 0.00 0.00 1.69 0.00 0.00  
## 40 0.00 1.72 0.00 0.00 0.00 0.00 0.00 0.00  
## 41 10.53 0.00 10.53 15.79 0.00 0.00 1.75 0.00  
## 42 1.82 0.00 0.00 5.45 0.00 0.00 0.00 0.00  
## 43 1.89 9.43 24.53 0.00 0.00 16.98 0.00 7.55  
## 44 0.00 0.00 1.89 0.00 0.00 0.00 0.00 0.00  
## 45 1.89 62.26 1.89 11.32 0.00 0.00 0.00 0.00  
## 46 9.43 1.89 3.77 24.53 1.89 0.00 1.89 0.00  
## 47 1.92 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 48 1.92 1.92 3.85 0.00 0.00 0.00 0.00 0.00  
## 49 1.96 9.80 0.00 19.61 3.92 1.96 0.00 0.00  
## 50 12.00 2.00 14.00 4.00 0.00 0.00 0.00 0.00  
## 51 2.00 0.00 0.00 2.00 0.00 0.00 0.00 0.00  
## 52 0.00 2.00 0.00 2.00 0.00 0.00 0.00 0.00  
## 53 6.00 0.00 0.00 4.00 0.00 0.00 0.00 0.00  
## 54 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 55 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 56 0.00 26.83 7.32 0.00 0.00 0.00 0.00 7.32  
## 57 0.00 53.85 2.56 0.00 0.00 0.00 0.00 15.38  
## 58 0.00 5.13 0.00 0.00 0.00 0.00 0.00 0.00  
## 59 2.56 0.00 0.00 2.56 0.00 0.00 0.00 0.00  
## 60 7.89 0.00 0.00 73.68 0.00 0.00 5.26 0.00  
## 61 2.63 2.63 0.00 0.00 0.00 0.00 0.00 0.00  
## 62 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 63 0.00 2.86 0.00 0.00 0.00 0.00 0.00 0.00  
## 64 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 65 0.00 20.59 0.00 0.00 0.00 0.00 0.00 0.00  
## 66 0.00 26.47 0.00 23.53 0.00 0.00 0.00 0.00  
## 67 0.00 0.00 6.06 0.00 0.00 0.00 0.00 0.00  
## 68 30.30 18.18 0.00 0.00 0.00 0.00 0.00 0.00  
## 69 0.00 15.63 15.63 0.00 0.00 18.75 0.00 0.00  
## 70 12.50 12.50 0.00 0.00 0.00 0.00 0.00 0.00  
## 71 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 72 0.00 13.33 26.67 0.00 0.00 3.33 0.00 3.33  
## 73 0.00 0.00 33.33 0.00 6.67 3.33 0.00 0.00  
## 74 0.00 3.33 3.33 36.67 0.00 0.00 0.00 0.00  
## 75 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 76 0.00 6.67 3.33 0.00 0.00 0.00 0.00 0.00  
## 77 0.00 3.45 0.00 0.00 0.00 0.00 0.00 0.00  
## 78 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 79 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 80 0.00 65.38 0.00 7.69 0.00 0.00 0.00 0.00  
## 81 3.85 0.00 7.69 3.85 0.00 0.00 3.85 0.00  
## 82 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 83 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 84 0.00 4.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 85 8.00 0.00 4.00 4.00 0.00 0.00 0.00 0.00  
## 86 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 87 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 88 4.35 30.43 13.04 4.35 0.00 0.00 4.35 0.00  
## 89 0.00 5.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 90 55.00 5.00 0.00 10.00 10.00 0.00 0.00 0.00  
## 91 0.00 26.32 5.26 21.05 0.00 0.00 0.00 0.00  
## 92 0.00 5.56 0.00 0.00 0.00 0.00 0.00 0.00  
## 93 0.00 5.56 0.00 0.00 0.00 0.00 0.00 0.00  
## 94 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 95 0.00 6.25 0.00 0.00 0.00 0.00 0.00 12.50  
## 96 0.00 6.25 0.00 0.00 0.00 0.00 0.00 0.00  
## 97 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 98 0.00 43.75 0.00 0.00 0.00 0.00 0.00 0.00  
## 99 6.67 6.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 101 13.33 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 102 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 103 0.00 7.69 0.00 0.00 0.00 0.00 0.00 0.00  
## 104 0.00 53.85 0.00 23.08 0.00 0.00 0.00 0.00  
## 105 7.69 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 106 0.00 8.33 0.00 0.00 0.00 0.00 0.00 0.00  
## 107 0.00 8.33 0.00 0.00 0.00 0.00 0.00 0.00  
## 108 0.00 0.00 0.00 33.33 0.00 0.00 0.00 0.00  
## 109 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 110 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 111 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 112 0.00 0.00 33.33 0.00 0.00 22.22 0.00 11.11  
## 113 0.00 11.11 0.00 0.00 0.00 0.00 0.00 0.00  
## 114 0.00 0.00 0.00 11.11 0.00 0.00 0.00 0.00  
## 115 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 116 0.00 0.00 37.50 0.00 0.00 0.00 0.00 62.50  
## 117 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 118 0.00 0.00 0.00 12.50 0.00 0.00 0.00 0.00  
## 119 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 120 0.00 28.57 0.00 0.00 0.00 0.00 0.00 0.00  
## 121 0.00 42.86 0.00 0.00 0.00 0.00 0.00 0.00  
## 122 0.00 42.86 0.00 0.00 0.00 0.00 0.00 0.00  
## 123 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 124 0.00 14.29 0.00 28.57 0.00 0.00 0.00 0.00  
## 125 0.00 66.67 33.33 0.00 0.00 0.00 0.00 0.00  
## 126 0.00 0.00 16.67 0.00 0.00 0.00 0.00 83.33  
## 127 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 128 0.00 16.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 129 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 130 0.00 16.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 131 16.67 0.00 0.00 16.67 0.00 0.00 0.00 0.00  
## 132 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 133 0.00 80.00 20.00 0.00 0.00 0.00 0.00 0.00  
## 134 0.00 40.00 60.00 0.00 0.00 0.00 0.00 0.00  
## 135 0.00 20.00 80.00 0.00 0.00 0.00 0.00 0.00  
## 136 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 137 0.00 40.00 0.00 20.00 0.00 0.00 0.00 0.00  
## 138 0.00 25.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 139 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 140 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 141 0.00 0.00 25.00 0.00 0.00 0.00 0.00 0.00  
## 142 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 143 0.00 66.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 144 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 145 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 146 0.00 33.33 0.00 0.00 0.00 0.00 0.00 0.00  
## 147 0.00 33.33 0.00 0.00 0.00 0.00 0.00 0.00  
## 148 0.00 50.00 50.00 0.00 0.00 0.00 0.00 0.00  
## 149 0.00 0.00 50.00 0.00 0.00 0.00 0.00 50.00  
## 150 0.00 0.00 50.00 0.00 0.00 0.00 0.00 0.00  
## 151 50.00 50.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 152 0.00 0.00 100.00 0.00 0.00 0.00 0.00 0.00  
## 153 0.00 0.00 100.00 0.00 0.00 0.00 0.00 0.00  
## 154 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 155 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 156 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 157 0.00 100.00 0.00 0.00 0.00 0.00 0.00 0.00  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 1 0.44 0.65 0.00  
## 2 0.00 0.00 0.00  
## 3 0.00 0.00 0.00  
## 4 0.00 0.00 0.00  
## 5 0.00 0.00 0.00  
## 6 0.00 1.03 0.00  
## 7 0.00 0.00 0.00  
## 8 0.00 0.00 0.00  
## 9 0.68 0.68 0.00  
## 10 0.00 0.00 0.00  
## 11 0.00 0.00 0.00  
## 12 0.00 0.00 0.00  
## 13 0.00 0.00 0.00  
## 14 0.00 0.00 0.00  
## 15 0.00 0.00 0.00  
## 16 0.00 0.00 0.00  
## 17 0.00 0.00 0.00  
## 18 0.00 0.00 0.00  
## 19 0.00 2.27 0.00  
## 20 0.00 0.00 0.00  
## 21 0.00 0.00 0.00  
## 22 6.17 1.23 0.00  
## 23 1.25 0.00 0.00  
## 24 0.00 0.00 1.28  
## 25 0.00 0.00 0.00  
## 26 0.00 0.00 0.00  
## 27 0.00 0.00 0.00  
## 28 0.00 0.00 0.00  
## 29 0.00 0.00 0.00  
## 30 0.00 0.00 0.00  
## 31 0.00 1.41 0.00  
## 32 0.00 0.00 0.00  
## 33 0.00 0.00 0.00  
## 34 0.00 0.00 0.00  
## 35 0.00 0.00 0.00  
## 37 0.00 0.00 0.00  
## 38 0.00 0.00 0.00  
## 39 0.00 0.00 0.00  
## 40 0.00 0.00 0.00  
## 41 0.00 0.00 0.00  
## 42 0.00 0.00 0.00  
## 43 0.00 0.00 5.66  
## 44 0.00 0.00 0.00  
## 45 9.43 3.77 0.00  
## 46 0.00 0.00 0.00  
## 47 0.00 0.00 0.00  
## 48 0.00 0.00 0.00  
## 49 0.00 0.00 0.00  
## 50 0.00 0.00 0.00  
## 51 0.00 0.00 0.00  
## 52 2.00 0.00 0.00  
## 53 0.00 0.00 0.00  
## 54 0.00 0.00 0.00  
## 55 0.00 0.00 0.00  
## 56 0.00 0.00 0.00  
## 57 0.00 0.00 0.00  
## 58 0.00 0.00 0.00  
## 59 0.00 0.00 0.00  
## 60 0.00 0.00 0.00  
## 61 0.00 0.00 0.00  
## 62 0.00 0.00 0.00  
## 63 0.00 0.00 0.00  
## 64 0.00 0.00 0.00  
## 65 0.00 0.00 0.00  
## 66 2.94 0.00 0.00  
## 67 0.00 0.00 0.00  
## 68 0.00 0.00 0.00  
## 69 0.00 0.00 0.00  
## 70 0.00 0.00 0.00  
## 71 0.00 0.00 0.00  
## 72 0.00 0.00 3.33  
## 73 0.00 0.00 3.33  
## 74 0.00 0.00 0.00  
## 75 0.00 0.00 0.00  
## 76 0.00 0.00 0.00  
## 77 0.00 0.00 0.00  
## 78 0.00 0.00 0.00  
## 79 0.00 0.00 0.00  
## 80 7.69 0.00 0.00  
## 81 0.00 0.00 0.00  
## 82 0.00 0.00 0.00  
## 83 0.00 0.00 0.00  
## 84 0.00 0.00 0.00  
## 85 0.00 0.00 0.00  
## 86 0.00 0.00 0.00  
## 87 0.00 0.00 0.00  
## 88 4.35 8.70 0.00  
## 89 0.00 0.00 0.00  
## 90 0.00 0.00 0.00  
## 91 31.58 0.00 0.00  
## 92 0.00 0.00 0.00  
## 93 0.00 0.00 0.00  
## 94 0.00 0.00 0.00  
## 95 0.00 0.00 0.00  
## 96 0.00 0.00 0.00  
## 97 0.00 0.00 0.00  
## 98 0.00 0.00 0.00  
## 99 0.00 0.00 0.00  
## 100 0.00 0.00 0.00  
## 101 0.00 0.00 0.00  
## 102 0.00 0.00 0.00  
## 103 0.00 0.00 0.00  
## 104 15.38 0.00 0.00  
## 105 0.00 0.00 0.00  
## 106 0.00 0.00 0.00  
## 107 0.00 0.00 0.00  
## 108 16.67 0.00 0.00  
## 109 0.00 0.00 0.00  
## 110 0.00 0.00 0.00  
## 111 0.00 0.00 0.00  
## 112 0.00 0.00 0.00  
## 113 0.00 0.00 0.00  
## 114 11.11 0.00 0.00  
## 115 0.00 0.00 0.00  
## 116 0.00 0.00 0.00  
## 117 0.00 0.00 0.00  
## 118 0.00 0.00 0.00  
## 119 0.00 0.00 0.00  
## 120 0.00 0.00 0.00  
## 121 0.00 0.00 0.00  
## 122 0.00 0.00 0.00  
## 123 0.00 0.00 0.00  
## 124 28.57 0.00 0.00  
## 125 0.00 0.00 0.00  
## 126 0.00 0.00 0.00  
## 127 0.00 0.00 0.00  
## 128 0.00 0.00 0.00  
## 129 0.00 0.00 0.00  
## 130 0.00 0.00 0.00  
## 131 0.00 0.00 0.00  
## 132 0.00 0.00 0.00  
## 133 0.00 0.00 0.00  
## 134 0.00 0.00 0.00  
## 135 0.00 0.00 0.00  
## 136 0.00 0.00 0.00  
## 137 20.00 0.00 0.00  
## 138 0.00 0.00 0.00  
## 139 0.00 0.00 0.00  
## 140 0.00 0.00 0.00  
## 141 0.00 0.00 0.00  
## 142 0.00 0.00 0.00  
## 143 0.00 0.00 0.00  
## 144 0.00 0.00 0.00  
## 145 66.67 33.33 0.00  
## 146 33.33 0.00 0.00  
## 147 33.33 33.33 0.00  
## 148 0.00 0.00 0.00  
## 149 0.00 0.00 0.00  
## 150 0.00 0.00 0.00  
## 151 0.00 0.00 0.00  
## 152 0.00 0.00 0.00  
## 153 0.00 0.00 0.00  
## 154 0.00 0.00 0.00  
## 155 0.00 0.00 0.00  
## 156 0.00 0.00 0.00  
## 157 0.00 0.00 0.00

data$Country=as.factor(data$Country)  
data$Localisation=as.factor(data$Localisation)  
data$Species=as.factor(data$Species)  
data$Sex=as.factor(data$Sex)  
str(data)

## 'data.frame': 156 obs. of 18 variables:  
## $ Country : Factor w/ 15 levels "BKF","ETH","GHA",..: 2 1 1 9 5 5 8 14 12 1 ...  
## $ Localisation: Factor w/ 94 levels "Arba minch, nech SAFr",..: 1 14 14 74 37 65 73 56 90 14 ...  
## $ Species : Factor w/ 10 levels "Ga","Gb","Gff",..: 7 10 10 8 7 7 2 7 7 6 ...  
## $ Sex : Factor w/ 3 levels "F","M","NI": 3 1 2 3 3 3 3 3 3 1 ...  
## $ Sample : int 1 2 3 4 5 6 7 8 9 10 ...  
## $ Prev\_Sod : num 20.5 0 0 0 42.6 ...  
## $ Prev\_Tspp : num 20.04 16.54 15 7.04 88.72 ...  
## $ Prev\_Tc : num 6.1 1.1 3.64 1.51 21.54 ...  
## $ Prev\_Tv : num 0.65 13.24 11.36 2.01 15.38 ...  
## $ Prev\_Tz : num 1.09 0.37 0 0.5 0.51 1.03 0 0.68 0.68 0 ...  
## $ Prev\_Tsg : num 10.46 0 0 3.02 26.15 ...  
## $ Prev\_TcTv : num 0 0.74 0 0 6.67 1.03 0 0 0 0 ...  
## $ Prev\_TcTz : num 0 1.1 0 0 1.54 0.51 0 0 0 0.76 ...  
## $ Prev\_TcTsg : num 0.65 0 0 0 15.9 0.51 0 7.53 0.68 0 ...  
## $ Prev\_TvTz : num 0 0 0 0 1.03 0 0 0 0 0 ...  
## $ Prev\_TvTsg : num 0.44 0 0 0 0 0 0 0 0.68 0 ...  
## $ Prev\_TzTsg : num 0.65 0 0 0 0 1.03 0 0 0.68 0 ...  
## $ Prev\_TcTvTz : num 0 0 0 0 0 0 0 0 0 0 ...  
## - attr(\*, "na.action")= 'omit' Named int 36  
## ..- attr(\*, "names")= chr "36"

attach(data)

## The following objects are masked from data (pos = 3):  
##   
## Country, Localisation, Prev\_Sod, Prev\_Tc, Prev\_TcTsg, Prev\_TcTv,  
## Prev\_TcTvTz, Prev\_TcTz, Prev\_Tsg, Prev\_Tspp, Prev\_Tv, Prev\_TvTsg,  
## Prev\_TvTz, Prev\_Tz, Prev\_TzTsg, Sample, Sex, Species

head(data)

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc  
## 1 ETH Arba minch, nech SAFr Gp NI 1 20.48 20.04 6.10  
## 2 BKF Comoe Gt F 2 0.00 16.54 1.10  
## 3 BKF Comoe Gt M 3 0.00 15.00 3.64  
## 4 SEN Pout Gpg NI 4 0.00 7.04 1.51  
## 5 KEN Katotoi Gp NI 5 42.56 88.72 21.54  
## 6 KEN Mwea Gp NI 6 3.08 19.49 7.18  
## Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 1 0.65 1.09 10.46 0.00 0.00 0.65 0.00 0.44  
## 2 13.24 0.37 0.00 0.74 1.10 0.00 0.00 0.00  
## 3 11.36 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 4 2.01 0.50 3.02 0.00 0.00 0.00 0.00 0.00  
## 5 15.38 0.51 26.15 6.67 1.54 15.90 1.03 0.00  
## 6 0.51 1.03 7.69 1.03 0.51 0.51 0.00 0.00  
## Prev\_TzTsg Prev\_TcTvTz  
## 1 0.65 0  
## 2 0.00 0  
## 3 0.00 0  
## 4 0.00 0  
## 5 0.00 0  
## 6 1.03 0

data=na.omit(data)  
data

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp  
## 1 ETH Arba minch, nech SAFr Gp NI 1 20.48 20.04  
## 2 BKF Comoe Gt F 2 0.00 16.54  
## 3 BKF Comoe Gt M 3 0.00 15.00  
## 4 SEN Pout Gpg NI 4 0.00 7.04  
## 5 KEN Katotoi Gp NI 5 42.56 88.72  
## 6 KEN Mwea Gp NI 6 3.08 19.49  
## 7 SAF Phinda Gb NI 7 4.12 0.00  
## 8 ZAM Mfuwe Gp NI 8 2.05 45.21  
## 9 URT URTzania Gp NI 9 78.77 19.86  
## 10 BKF Comoe Gmsm F 10 0.00 9.16  
## 11 BKF Folonzo Gt F 11 0.00 18.87  
## 12 BKF Folonzo Gpg F 12 0.00 7.55  
## 13 BKF Folonzo Gpg M 13 1.89 16.04  
## 14 BKF Folonzo Gt M 14 0.00 32.63  
## 15 GUI Kangoliya Gpg F 15 95.74 0.00  
## 16 UGA Buvuma island Gff NI 16 4.26 10.64  
## 17 KEN Kari Gp NI 17 89.36 2.13  
## 18 SEN Kayar Gpg NI 18 0.00 1.14  
## 19 KEN Koibos Gp NI 19 0.00 71.59  
## 20 KEN Meru nat. parc Gp NI 20 22.99 70.11  
## 21 KEN Kari Gmm NI 21 63.53 2.35  
## 22 URT MaSAFng-URTga Gmm NI 22 76.54 53.09  
## 23 KEN Ruma nat. parc Gp NI 23 26.25 17.50  
## 24 GHA Walewale Gt M 24 0.00 53.85  
## 25 BKF Moussodougou Gpg F 25 0.00 44.87  
## 26 ZIM Makuti Gmm NI 26 26.92 91.03  
## 27 SAF False Bay Park Ga NI 27 0.00 2.60  
## 28 BKF Comoe Gmsm M 28 0.00 10.67  
## 29 BKF Folonzo Gmsm M 29 0.00 40.00  
## 30 BKF Comoe Gpg F 30 0.00 2.82  
## 31 URT MaSAFng-URTga Gp NI 31 66.20 73.24  
## 32 BKF Kartasso Gpg F 32 0.00 0.00  
## 33 BKF Kartasso Gpg M 33 0.00 0.00  
## 34 SEN DiackSAFo Peulh Gpg NI 34 0.00 7.69  
## 35 BKF Moussodougou Gpg M 35 0.00 21.88  
## 37 BKF Comoe Gmed M 37 6.56 24.59  
## 38 KEN Emsos Gp NI 38 0.00 93.33  
## 39 BKF Folonzo Gmsm F 39 1.69 20.34  
## 40 MLI Bani Gpg F 40 0.00 1.72  
## 41 SAF SAFint Lucia Ga NI 41 0.00 38.60  
## 42 UGA Budaka Gp NI 42 94.55 7.27  
## 43 GHA Walewale Gt F 43 0.00 66.04  
## 44 BKF Arly Gt F 44 0.00 1.89  
## 45 BKF Kampty Gpg F 45 0.00 90.57  
## 46 SAF Lower Mkhuze Ga NI 46 0.00 43.40  
## 47 BKF Comoe Gpg M 47 0.00 1.92  
## 48 MLI SEN Gpg M 48 0.00 7.69  
## 49 KEN Ikapolok Gff NI 49 39.22 37.25  
## 50 SAF Hluhluwe Gb NI 50 0.00 32.00  
## 51 SAF North eastern KwaZulu-Natal Gb NI 51 0.00 4.00  
## 52 MOZ Reserva Especial de Maputo Gb NI 52 14.00 6.00  
## 53 MOZ Reserva Especial de Maputo Ga NI 53 0.00 10.00  
## 54 BKF Bama Gpg F 54 0.00 0.00  
## 55 BKF Arly Gt M 55 0.00 0.00  
## 56 SEN Tambacounda Gpg F 56 0.00 41.46  
## 57 SEN Tambacounda Gpg M 57 0.00 71.79  
## 58 SEN SebikoURTe Gpg NI 58 0.00 5.13  
## 59 SAF North eastern KwaZulu-Natal Ga NI 59 5.13 5.13  
## 60 ZIM Makuti Gp NI 60 15.79 86.84  
## 61 KEN Obekai Gff NI 61 0.00 5.26  
## 62 MLI SEN Gpg F 62 0.00 0.00  
## 63 ZAI ZAI Gpp NI 63 11.43 2.86  
## 64 BKF Bama Gpg M 64 0.00 0.00  
## 65 MLI Banco Gpg F 65 0.00 20.59  
## 66 BKF Dedougou Gpg F 66 0.00 52.94  
## 67 MLI Sikasso Gpg F 67 0.00 6.06  
## 68 BKF Comoe Gmed F 68 12.12 51.52  
## 69 GHA MorURTi Gt M 69 0.00 50.00  
## 70 BKF Sissili Gt M 70 0.00 25.00  
## 71 GUI Kangoliya Gpg M 71 0.00 0.00  
## 72 BKF Folonzo Gmed F 72 0.00 50.00  
## 73 BKF Folonzo Gmed M 73 0.00 46.67  
## 74 SAF SAFint Lucia Gb NI 74 0.00 43.33  
## 75 SWA Mlawula Nature Reserve Ga NI 75 0.00 0.00  
## 76 URT Uguja island Ga NI 76 6.67 10.00  
## 77 GUI Mini Gpg F 77 0.00 3.45  
## 78 SEN Hann Gpg NI 78 0.00 0.00  
## 79 UGA Omugo Gp NI 79 100.00 0.00  
## 80 BKF Kampty Gpg M 80 0.00 80.77  
## 81 ZIM Mushumb Gp NI 81 3.85 19.23  
## 82 GUI Kifala Gpg M 82 0.00 0.00  
## 83 MLI Sikasso Gpg M 83 0.00 0.00  
## 84 MLI SS Gpg F 84 0.00 4.00  
## 85 UGA Lira Gp NI 85 0.00 16.00  
## 86 BKF Kenedougou Gpg F 86 0.00 0.00  
## 87 MLI SS Gpg M 87 0.00 0.00  
## 88 BKF Dedougou Gpg M 88 0.00 69.57  
## 89 GUI Bafing Gpg F 89 0.00 5.00  
## 90 KEN Kiria Gp NI 90 0.00 80.00  
## 91 BKF Kampty Gpg NI 91 0.00 84.21  
## 92 GUI Tinkisso Gpg M 92 0.00 5.56  
## 93 ZIM Kemukura Gmm NI 93 22.22 5.56  
## 94 BKF Kenedougou Gpg M 94 0.00 0.00  
## 95 GHA Bougouhiya Gt F 95 0.00 18.75  
## 96 GUI Dekonkore Gpg F 96 0.00 6.25  
## 97 GUI Mini Gpg M 97 0.00 0.00  
## 98 SEN Fleuve Gambie Gpg M 98 0.00 43.75  
## 99 BKF Sissili Gt F 99 0.00 13.33  
## 100 ZIM Rukomeshi Gmm NI 100 20.00 0.00  
## 101 KEN Mwea nat. parc Gp NI 101 0.00 13.33  
## 102 GUI Bafing Gpg M 102 0.00 0.00  
## 103 GUI Tinkisso Gpg F 103 0.00 7.69  
## 104 BKF Bouroum bouroum Gpg F 104 0.00 92.31  
## 105 ZIM Mukondore Gmm NI 105 23.08 7.69  
## 106 GUI Karifale Gpg M 106 0.00 8.33  
## 107 GUI Lemonako Gpg F 107 0.00 0.00  
## 108 BKF KouriGUIon Gpg F 108 0.00 50.00  
## 109 MLI Bani Gpg M 109 0.00 0.00  
## 110 MLI Sybi Gpg F 110 0.00 0.00  
## 111 MLI Sybi Gpg M 111 0.00 0.00  
## 112 GHA MorURTi Gt F 112 0.00 66.67  
## 113 SEN Fleueve G Gpg F 113 0.00 11.11  
## 114 BKF KouriGUIon Gpg NI 114 0.00 22.22  
## 115 ZIM M. chiuyi Gmm NI 115 11.11 0.00  
## 116 GHA Fumbissi Gt F 116 0.00 100.00  
## 117 GUI Lemonako Gpg M 117 0.00 0.00  
## 118 UGA Moyo Gp NI 118 87.50 12.50  
## 119 SEN Diaguiri Gpg F 119 0.00 0.00  
## 120 MLI Banco Gpg M 120 0.00 28.57  
## 121 MLI Baoule Gpg F 121 0.00 42.86  
## 122 MLI Baoule Gpg M 122 0.00 42.86  
## 123 MLI Bougouni Gpg M 123 0.00 0.00  
## 124 BKF Lorepeni Gpg F 124 0.00 71.43  
## 125 GHA Fumbissi Gt M 125 0.00 100.00  
## 126 GHA Grogro Gt M 126 0.00 100.00  
## 127 SEN MousSAFlla Gpg M 127 0.00 0.00  
## 128 MLI Baguineda Gpg F 128 0.00 16.67  
## 129 MLI Bougouni Gpg F 129 0.00 0.00  
## 130 MLI Kita Gpg M 130 0.00 16.67  
## 131 ZIM Mushumb Gmm NI 131 0.00 33.33  
## 132 URT Zanzibar Ga NI 132 16.67 0.00  
## 133 GHA Grogro Gt F 133 0.00 100.00  
## 134 GHA Kumpole Gt F 134 0.00 100.00  
## 135 GHA Sissili Bidge Gt F 135 0.00 100.00  
## 136 GUI Kifala Gpg F 136 0.00 0.00  
## 137 BKF Bouroum bouroum Gpg M 137 0.00 80.00  
## 138 SEN Fleuve Gambie Gpg F 138 0.00 25.00  
## 139 ZIM Rukomeshi Gp NI 139 0.00 0.00  
## 140 ZIM Gokwe Gp NI 140 0.00 0.00  
## 141 URT Jozani Ga NI 141 0.00 25.00  
## 142 GHA Bougouhiya Gt M 142 0.00 0.00  
## 143 SEN Niokolo Gpg M 143 0.00 0.00  
## 144 BKF Sissili Gmsm M 144 0.00 0.00  
## 145 BKF Lorepeni Gpg M 145 0.00 100.00  
## 146 BKF KouriGUIon Gpg M 146 0.00 66.67  
## 147 BKF Ouarkoye Gpg M 147 0.00 100.00  
## 148 GHA Kumpole Gt M 148 0.00 100.00  
## 149 GHA Psikp\_ Gt M 149 0.00 100.00  
## 150 SEN Diaguiri Gpg M 150 0.00 50.00  
## 151 BKF Ouarkoye Gpg F 151 0.00 100.00  
## 152 GHA Kandiaga Gt M 152 0.00 100.00  
## 153 GHA Sissili Bidge Gt M 153 0.00 100.00  
## 154 GHA Nabogo Gt F 154 0.00 0.00  
## 155 GHA Volta Blanche Gt F 155 0.00 0.00  
## 156 GUI Karifale Gpg F 156 0.00 0.00  
## 157 SEN Mako Gpg M 157 0.00 100.00  
## Prev\_Tc Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 1 6.10 0.65 1.09 10.46 0.00 0.00 0.65 0.00  
## 2 1.10 13.24 0.37 0.00 0.74 1.10 0.00 0.00  
## 3 3.64 11.36 0.00 0.00 0.00 0.00 0.00 0.00  
## 4 1.51 2.01 0.50 3.02 0.00 0.00 0.00 0.00  
## 5 21.54 15.38 0.51 26.15 6.67 1.54 15.90 1.03  
## 6 7.18 0.51 1.03 7.69 1.03 0.51 0.51 0.00  
## 7 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 8 1.37 0.68 0.68 34.93 0.00 0.00 7.53 0.00  
## 9 6.16 2.74 0.68 8.22 0.00 0.00 0.68 0.00  
## 10 5.34 3.05 0.00 0.00 0.00 0.76 0.00 0.00  
## 11 1.89 12.26 1.89 0.00 1.89 0.94 0.00 0.00  
## 12 0.94 2.83 1.89 0.00 0.00 0.00 0.00 1.89  
## 13 0.00 5.66 5.66 0.00 0.00 1.89 0.00 2.83  
## 14 2.11 27.37 1.05 0.00 0.00 1.05 0.00 1.05  
## 15 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 16 3.19 2.13 1.06 3.19 0.00 0.00 1.06 0.00  
## 17 1.06 0.00 1.06 0.00 0.00 0.00 0.00 0.00  
## 18 0.00 0.00 0.00 1.14 0.00 0.00 0.00 0.00  
## 19 15.91 9.09 0.00 28.41 0.00 0.00 15.91 0.00  
## 20 29.89 4.60 0.00 25.29 0.00 0.00 10.34 0.00  
## 21 2.35 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 22 18.52 1.23 1.23 18.52 0.00 0.00 6.17 0.00  
## 23 10.00 2.50 2.50 0.00 1.25 0.00 0.00 0.00  
## 24 3.85 12.82 8.97 0.00 0.00 10.26 0.00 14.10  
## 25 0.00 20.51 12.82 0.00 0.00 0.00 0.00 11.54  
## 26 11.54 0.00 2.56 69.23 0.00 0.00 7.69 0.00  
## 27 2.60 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 28 5.33 2.67 1.33 0.00 0.00 1.33 0.00 0.00  
## 29 5.33 34.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 30 1.41 1.41 0.00 0.00 0.00 0.00 0.00 0.00  
## 31 33.80 0.00 0.00 14.08 0.00 1.41 21.13 1.41  
## 32 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 33 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 34 0.00 1.54 1.54 4.62 0.00 0.00 0.00 0.00  
## 35 0.00 6.25 15.63 0.00 0.00 0.00 0.00 0.00  
## 37 6.56 13.11 4.92 0.00 0.00 0.00 0.00 0.00  
## 38 15.00 8.33 0.00 58.33 1.67 0.00 10.00 0.00  
## 39 5.08 11.86 1.69 0.00 0.00 1.69 0.00 0.00  
## 40 0.00 1.72 0.00 0.00 0.00 0.00 0.00 0.00  
## 41 10.53 0.00 10.53 15.79 0.00 0.00 1.75 0.00  
## 42 1.82 0.00 0.00 5.45 0.00 0.00 0.00 0.00  
## 43 1.89 9.43 24.53 0.00 0.00 16.98 0.00 7.55  
## 44 0.00 0.00 1.89 0.00 0.00 0.00 0.00 0.00  
## 45 1.89 62.26 1.89 11.32 0.00 0.00 0.00 0.00  
## 46 9.43 1.89 3.77 24.53 1.89 0.00 1.89 0.00  
## 47 1.92 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 48 1.92 1.92 3.85 0.00 0.00 0.00 0.00 0.00  
## 49 1.96 9.80 0.00 19.61 3.92 1.96 0.00 0.00  
## 50 12.00 2.00 14.00 4.00 0.00 0.00 0.00 0.00  
## 51 2.00 0.00 0.00 2.00 0.00 0.00 0.00 0.00  
## 52 0.00 2.00 0.00 2.00 0.00 0.00 0.00 0.00  
## 53 6.00 0.00 0.00 4.00 0.00 0.00 0.00 0.00  
## 54 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 55 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 56 0.00 26.83 7.32 0.00 0.00 0.00 0.00 7.32  
## 57 0.00 53.85 2.56 0.00 0.00 0.00 0.00 15.38  
## 58 0.00 5.13 0.00 0.00 0.00 0.00 0.00 0.00  
## 59 2.56 0.00 0.00 2.56 0.00 0.00 0.00 0.00  
## 60 7.89 0.00 0.00 73.68 0.00 0.00 5.26 0.00  
## 61 2.63 2.63 0.00 0.00 0.00 0.00 0.00 0.00  
## 62 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 63 0.00 2.86 0.00 0.00 0.00 0.00 0.00 0.00  
## 64 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 65 0.00 20.59 0.00 0.00 0.00 0.00 0.00 0.00  
## 66 0.00 26.47 0.00 23.53 0.00 0.00 0.00 0.00  
## 67 0.00 0.00 6.06 0.00 0.00 0.00 0.00 0.00  
## 68 30.30 18.18 0.00 0.00 0.00 0.00 0.00 0.00  
## 69 0.00 15.63 15.63 0.00 0.00 18.75 0.00 0.00  
## 70 12.50 12.50 0.00 0.00 0.00 0.00 0.00 0.00  
## 71 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 72 0.00 13.33 26.67 0.00 0.00 3.33 0.00 3.33  
## 73 0.00 0.00 33.33 0.00 6.67 3.33 0.00 0.00  
## 74 0.00 3.33 3.33 36.67 0.00 0.00 0.00 0.00  
## 75 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 76 0.00 6.67 3.33 0.00 0.00 0.00 0.00 0.00  
## 77 0.00 3.45 0.00 0.00 0.00 0.00 0.00 0.00  
## 78 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 79 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 80 0.00 65.38 0.00 7.69 0.00 0.00 0.00 0.00  
## 81 3.85 0.00 7.69 3.85 0.00 0.00 3.85 0.00  
## 82 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 83 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 84 0.00 4.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 85 8.00 0.00 4.00 4.00 0.00 0.00 0.00 0.00  
## 86 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 87 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 88 4.35 30.43 13.04 4.35 0.00 0.00 4.35 0.00  
## 89 0.00 5.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 90 55.00 5.00 0.00 10.00 10.00 0.00 0.00 0.00  
## 91 0.00 26.32 5.26 21.05 0.00 0.00 0.00 0.00  
## 92 0.00 5.56 0.00 0.00 0.00 0.00 0.00 0.00  
## 93 0.00 5.56 0.00 0.00 0.00 0.00 0.00 0.00  
## 94 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 95 0.00 6.25 0.00 0.00 0.00 0.00 0.00 12.50  
## 96 0.00 6.25 0.00 0.00 0.00 0.00 0.00 0.00  
## 97 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 98 0.00 43.75 0.00 0.00 0.00 0.00 0.00 0.00  
## 99 6.67 6.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 100 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 101 13.33 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 102 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 103 0.00 7.69 0.00 0.00 0.00 0.00 0.00 0.00  
## 104 0.00 53.85 0.00 23.08 0.00 0.00 0.00 0.00  
## 105 7.69 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 106 0.00 8.33 0.00 0.00 0.00 0.00 0.00 0.00  
## 107 0.00 8.33 0.00 0.00 0.00 0.00 0.00 0.00  
## 108 0.00 0.00 0.00 33.33 0.00 0.00 0.00 0.00  
## 109 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 110 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 111 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 112 0.00 0.00 33.33 0.00 0.00 22.22 0.00 11.11  
## 113 0.00 11.11 0.00 0.00 0.00 0.00 0.00 0.00  
## 114 0.00 0.00 0.00 11.11 0.00 0.00 0.00 0.00  
## 115 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 116 0.00 0.00 37.50 0.00 0.00 0.00 0.00 62.50  
## 117 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 118 0.00 0.00 0.00 12.50 0.00 0.00 0.00 0.00  
## 119 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 120 0.00 28.57 0.00 0.00 0.00 0.00 0.00 0.00  
## 121 0.00 42.86 0.00 0.00 0.00 0.00 0.00 0.00  
## 122 0.00 42.86 0.00 0.00 0.00 0.00 0.00 0.00  
## 123 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 124 0.00 14.29 0.00 28.57 0.00 0.00 0.00 0.00  
## 125 0.00 66.67 33.33 0.00 0.00 0.00 0.00 0.00  
## 126 0.00 0.00 16.67 0.00 0.00 0.00 0.00 83.33  
## 127 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 128 0.00 16.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 129 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 130 0.00 16.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 131 16.67 0.00 0.00 16.67 0.00 0.00 0.00 0.00  
## 132 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 133 0.00 80.00 20.00 0.00 0.00 0.00 0.00 0.00  
## 134 0.00 40.00 60.00 0.00 0.00 0.00 0.00 0.00  
## 135 0.00 20.00 80.00 0.00 0.00 0.00 0.00 0.00  
## 136 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 137 0.00 40.00 0.00 20.00 0.00 0.00 0.00 0.00  
## 138 0.00 25.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 139 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 140 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 141 0.00 0.00 25.00 0.00 0.00 0.00 0.00 0.00  
## 142 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 143 0.00 66.67 0.00 0.00 0.00 0.00 0.00 0.00  
## 144 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 145 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 146 0.00 33.33 0.00 0.00 0.00 0.00 0.00 0.00  
## 147 0.00 33.33 0.00 0.00 0.00 0.00 0.00 0.00  
## 148 0.00 50.00 50.00 0.00 0.00 0.00 0.00 0.00  
## 149 0.00 0.00 50.00 0.00 0.00 0.00 0.00 50.00  
## 150 0.00 0.00 50.00 0.00 0.00 0.00 0.00 0.00  
## 151 50.00 50.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 152 0.00 0.00 100.00 0.00 0.00 0.00 0.00 0.00  
## 153 0.00 0.00 100.00 0.00 0.00 0.00 0.00 0.00  
## 154 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 155 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 156 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 157 0.00 100.00 0.00 0.00 0.00 0.00 0.00 0.00  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 1 0.44 0.65 0.00  
## 2 0.00 0.00 0.00  
## 3 0.00 0.00 0.00  
## 4 0.00 0.00 0.00  
## 5 0.00 0.00 0.00  
## 6 0.00 1.03 0.00  
## 7 0.00 0.00 0.00  
## 8 0.00 0.00 0.00  
## 9 0.68 0.68 0.00  
## 10 0.00 0.00 0.00  
## 11 0.00 0.00 0.00  
## 12 0.00 0.00 0.00  
## 13 0.00 0.00 0.00  
## 14 0.00 0.00 0.00  
## 15 0.00 0.00 0.00  
## 16 0.00 0.00 0.00  
## 17 0.00 0.00 0.00  
## 18 0.00 0.00 0.00  
## 19 0.00 2.27 0.00  
## 20 0.00 0.00 0.00  
## 21 0.00 0.00 0.00  
## 22 6.17 1.23 0.00  
## 23 1.25 0.00 0.00  
## 24 0.00 0.00 1.28  
## 25 0.00 0.00 0.00  
## 26 0.00 0.00 0.00  
## 27 0.00 0.00 0.00  
## 28 0.00 0.00 0.00  
## 29 0.00 0.00 0.00  
## 30 0.00 0.00 0.00  
## 31 0.00 1.41 0.00  
## 32 0.00 0.00 0.00  
## 33 0.00 0.00 0.00  
## 34 0.00 0.00 0.00  
## 35 0.00 0.00 0.00  
## 37 0.00 0.00 0.00  
## 38 0.00 0.00 0.00  
## 39 0.00 0.00 0.00  
## 40 0.00 0.00 0.00  
## 41 0.00 0.00 0.00  
## 42 0.00 0.00 0.00  
## 43 0.00 0.00 5.66  
## 44 0.00 0.00 0.00  
## 45 9.43 3.77 0.00  
## 46 0.00 0.00 0.00  
## 47 0.00 0.00 0.00  
## 48 0.00 0.00 0.00  
## 49 0.00 0.00 0.00  
## 50 0.00 0.00 0.00  
## 51 0.00 0.00 0.00  
## 52 2.00 0.00 0.00  
## 53 0.00 0.00 0.00  
## 54 0.00 0.00 0.00  
## 55 0.00 0.00 0.00  
## 56 0.00 0.00 0.00  
## 57 0.00 0.00 0.00  
## 58 0.00 0.00 0.00  
## 59 0.00 0.00 0.00  
## 60 0.00 0.00 0.00  
## 61 0.00 0.00 0.00  
## 62 0.00 0.00 0.00  
## 63 0.00 0.00 0.00  
## 64 0.00 0.00 0.00  
## 65 0.00 0.00 0.00  
## 66 2.94 0.00 0.00  
## 67 0.00 0.00 0.00  
## 68 0.00 0.00 0.00  
## 69 0.00 0.00 0.00  
## 70 0.00 0.00 0.00  
## 71 0.00 0.00 0.00  
## 72 0.00 0.00 3.33  
## 73 0.00 0.00 3.33  
## 74 0.00 0.00 0.00  
## 75 0.00 0.00 0.00  
## 76 0.00 0.00 0.00  
## 77 0.00 0.00 0.00  
## 78 0.00 0.00 0.00  
## 79 0.00 0.00 0.00  
## 80 7.69 0.00 0.00  
## 81 0.00 0.00 0.00  
## 82 0.00 0.00 0.00  
## 83 0.00 0.00 0.00  
## 84 0.00 0.00 0.00  
## 85 0.00 0.00 0.00  
## 86 0.00 0.00 0.00  
## 87 0.00 0.00 0.00  
## 88 4.35 8.70 0.00  
## 89 0.00 0.00 0.00  
## 90 0.00 0.00 0.00  
## 91 31.58 0.00 0.00  
## 92 0.00 0.00 0.00  
## 93 0.00 0.00 0.00  
## 94 0.00 0.00 0.00  
## 95 0.00 0.00 0.00  
## 96 0.00 0.00 0.00  
## 97 0.00 0.00 0.00  
## 98 0.00 0.00 0.00  
## 99 0.00 0.00 0.00  
## 100 0.00 0.00 0.00  
## 101 0.00 0.00 0.00  
## 102 0.00 0.00 0.00  
## 103 0.00 0.00 0.00  
## 104 15.38 0.00 0.00  
## 105 0.00 0.00 0.00  
## 106 0.00 0.00 0.00  
## 107 0.00 0.00 0.00  
## 108 16.67 0.00 0.00  
## 109 0.00 0.00 0.00  
## 110 0.00 0.00 0.00  
## 111 0.00 0.00 0.00  
## 112 0.00 0.00 0.00  
## 113 0.00 0.00 0.00  
## 114 11.11 0.00 0.00  
## 115 0.00 0.00 0.00  
## 116 0.00 0.00 0.00  
## 117 0.00 0.00 0.00  
## 118 0.00 0.00 0.00  
## 119 0.00 0.00 0.00  
## 120 0.00 0.00 0.00  
## 121 0.00 0.00 0.00  
## 122 0.00 0.00 0.00  
## 123 0.00 0.00 0.00  
## 124 28.57 0.00 0.00  
## 125 0.00 0.00 0.00  
## 126 0.00 0.00 0.00  
## 127 0.00 0.00 0.00  
## 128 0.00 0.00 0.00  
## 129 0.00 0.00 0.00  
## 130 0.00 0.00 0.00  
## 131 0.00 0.00 0.00  
## 132 0.00 0.00 0.00  
## 133 0.00 0.00 0.00  
## 134 0.00 0.00 0.00  
## 135 0.00 0.00 0.00  
## 136 0.00 0.00 0.00  
## 137 20.00 0.00 0.00  
## 138 0.00 0.00 0.00  
## 139 0.00 0.00 0.00  
## 140 0.00 0.00 0.00  
## 141 0.00 0.00 0.00  
## 142 0.00 0.00 0.00  
## 143 0.00 0.00 0.00  
## 144 0.00 0.00 0.00  
## 145 66.67 33.33 0.00  
## 146 33.33 0.00 0.00  
## 147 33.33 33.33 0.00  
## 148 0.00 0.00 0.00  
## 149 0.00 0.00 0.00  
## 150 0.00 0.00 0.00  
## 151 0.00 0.00 0.00  
## 152 0.00 0.00 0.00  
## 153 0.00 0.00 0.00  
## 154 0.00 0.00 0.00  
## 155 0.00 0.00 0.00  
## 156 0.00 0.00 0.00  
## 157 0.00 0.00 0.00

## Statistics showen in the mansucript consequently

model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_Tspp) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_Tspp) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_Tspp) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_Tspp) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model1 16 1521.35 0.00 0.9 0.9 -742.72  
## model4 23 1525.81 4.46 0.1 1.0 -735.72  
## model3 27 1534.50 13.15 0.0 1.0 -734.34  
## model2 11 1545.55 24.20 0.0 1.0 -760.86  
## model6 100 1571.61 50.26 0.0 1.0 -502.17  
## model5 103 1614.79 93.44 0.0 1.0 -498.39

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 35.627 4.536 7.855 9.24e-13 \*\*\*  
## CountryETH -15.587 30.088 -0.518 0.605225   
## CountryGHA 34.112 8.350 4.085 7.35e-05 \*\*\*  
## CountryGUI -33.209 8.919 -3.723 0.000284 \*\*\*  
## CountryKEN 6.128 9.711 0.631 0.529059   
## CountryMLI -25.200 8.350 -3.018 0.003021 \*\*   
## CountryMOZ -27.627 21.516 -1.284 0.201227   
## CountrySAF -14.495 11.453 -1.266 0.207727   
## CountrySEN -11.353 8.919 -1.273 0.205148   
## CountrySWA -35.627 30.088 -1.184 0.238360   
## CountryUGA -26.345 14.054 -1.875 0.062918 .   
## CountryURT -5.429 12.962 -0.419 0.675975   
## CountryZAI -32.767 30.088 -1.089 0.277985   
## CountryZAM 9.583 30.088 0.318 0.750587   
## CountryZIM -11.259 10.442 -1.078 0.282769   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 63.56 14 2.76e-08 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Species 21.863 9 0.009324 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-----------------------------------------------------------------------  
#impact of taxa and countries  
  
# statistics in the manuscript  
data\_ga <- subset(data, Species=="Ga")  
data\_ga

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp  
## 27 SAF False Bay Park Ga NI 27 0.00 2.60  
## 41 SAF SAFint Lucia Ga NI 41 0.00 38.60  
## 46 SAF Lower Mkhuze Ga NI 46 0.00 43.40  
## 53 MOZ Reserva Especial de Maputo Ga NI 53 0.00 10.00  
## 59 SAF North eastern KwaZulu-Natal Ga NI 59 5.13 5.13  
## 75 SWA Mlawula Nature Reserve Ga NI 75 0.00 0.00  
## 76 URT Uguja island Ga NI 76 6.67 10.00  
## 132 URT Zanzibar Ga NI 132 16.67 0.00  
## 141 URT Jozani Ga NI 141 0.00 25.00  
## Prev\_Tc Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 27 2.60 0.00 0.00 0.00 0.00 0 0.00 0  
## 41 10.53 0.00 10.53 15.79 0.00 0 1.75 0  
## 46 9.43 1.89 3.77 24.53 1.89 0 1.89 0  
## 53 6.00 0.00 0.00 4.00 0.00 0 0.00 0  
## 59 2.56 0.00 0.00 2.56 0.00 0 0.00 0  
## 75 0.00 0.00 0.00 0.00 0.00 0 0.00 0  
## 76 0.00 6.67 3.33 0.00 0.00 0 0.00 0  
## 132 0.00 0.00 0.00 0.00 0.00 0 0.00 0  
## 141 0.00 0.00 25.00 0.00 0.00 0 0.00 0  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 27 0 0 0  
## 41 0 0 0  
## 46 0 0 0  
## 53 0 0 0  
## 59 0 0 0  
## 75 0 0 0  
## 76 0 0 0  
## 132 0 0 0  
## 141 0 0 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -19.832 16.168 20.968 0.000 -17.302 0.000 -1.667 -11.667   
## 141   
## 13.333   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 10.000 18.495 0.541 0.612  
## CountrySAF 12.433 20.678 0.601 0.574  
## CountrySWA -10.000 26.156 -0.382 0.718  
## CountryURT 1.667 21.357 0.078 0.941  
##   
## (Dispersion parameter for gaussian family taken to be 342.0791)  
##   
## Null deviance: 2214.7 on 8 degrees of freedom  
## Residual deviance: 1710.4 on 5 degrees of freedom  
## AIC: 82.766  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 1.4742 3 0.6882

#----------------------------------------------  
data\_gb <- subset(data, Species=="Gb")  
data\_gb

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp  
## 7 SAF Phinda Gb NI 7 4.12 0.00  
## 50 SAF Hluhluwe Gb NI 50 0.00 32.00  
## 51 SAF North eastern KwaZulu-Natal Gb NI 51 0.00 4.00  
## 52 MOZ Reserva Especial de Maputo Gb NI 52 14.00 6.00  
## 74 SAF SAFint Lucia Gb NI 74 0.00 43.33  
## Prev\_Tc Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 7 0 0.00 0.00 0.00 0 0 0 0  
## 50 12 2.00 14.00 4.00 0 0 0 0  
## 51 2 0.00 0.00 2.00 0 0 0 0  
## 52 0 2.00 0.00 2.00 0 0 0 0  
## 74 0 3.33 3.33 36.67 0 0 0 0  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 7 0 0 0  
## 50 0 0 0  
## 51 0 0 0  
## 52 2 0 0  
## 74 0 0 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gb, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gb)  
##   
## Deviance Residuals:   
## 7 50 51 52 74   
## -19.83 12.17 -15.83 0.00 23.50   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.00 21.17 0.283 0.795  
## CountrySAF 13.83 23.67 0.584 0.600  
##   
## (Dispersion parameter for gaussian family taken to be 448.0589)  
##   
## Null deviance: 1497.2 on 4 degrees of freedom  
## Residual deviance: 1344.2 on 3 degrees of freedom  
## AIC: 48.16  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 0.34163 1 0.5589

#-------------------------------------------  
data\_gff <- subset(data, Species=="Gff")  
data\_gff

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 16 UGA Buvuma island Gff NI 16 4.26 10.64 3.19 2.13  
## 49 KEN Ikapolok Gff NI 49 39.22 37.25 1.96 9.80  
## 61 KEN Obekai Gff NI 61 0.00 5.26 2.63 2.63  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 16 1.06 3.19 0.00 0.00 1.06 0 0  
## 49 0.00 19.61 3.92 1.96 0.00 0 0  
## 61 0.00 0.00 0.00 0.00 0.00 0 0  
## Prev\_TzTsg Prev\_TcTvTz  
## 16 0 0  
## 49 0 0  
## 61 0 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.00 15.99 -15.99   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 21.26 16.00 1.329 0.411  
## CountryUGA -10.61 27.70 -0.383 0.767  
##   
## (Dispersion parameter for gaussian family taken to be 511.68)  
##   
## Null deviance: 586.80 on 2 degrees of freedom  
## Residual deviance: 511.68 on 1 degrees of freedom  
## AIC: 29.931  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 0.14681 1 0.7016

#-------------------------------------------  
data\_gmm <- subset(data, Species=="Gmm")  
data\_gmm

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 21 KEN Kari Gmm NI 21 63.53 2.35 2.35 0.00  
## 22 URT MaSAFng-URTga Gmm NI 22 76.54 53.09 18.52 1.23  
## 26 ZIM Makuti Gmm NI 26 26.92 91.03 11.54 0.00  
## 93 ZIM Kemukura Gmm NI 93 22.22 5.56 0.00 5.56  
## 100 ZIM Rukomeshi Gmm NI 100 20.00 0.00 0.00 0.00  
## 105 ZIM Mukondore Gmm NI 105 23.08 7.69 7.69 0.00  
## 115 ZIM M. chiuyi Gmm NI 115 11.11 0.00 0.00 0.00  
## 131 ZIM Mushumb Gmm NI 131 0.00 33.33 16.67 0.00  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 21 0.00 0.00 0 0 0.00 0 0.00  
## 22 1.23 18.52 0 0 6.17 0 6.17  
## 26 2.56 69.23 0 0 7.69 0 0.00  
## 93 0.00 0.00 0 0 0.00 0 0.00  
## 100 0.00 0.00 0 0 0.00 0 0.00  
## 105 0.00 0.00 0 0 0.00 0 0.00  
## 115 0.00 0.00 0 0 0.00 0 0.00  
## 131 0.00 16.67 0 0 0.00 0 0.00  
## Prev\_TzTsg Prev\_TcTvTz  
## 21 0.00 0  
## 22 1.23 0  
## 26 0.00 0  
## 93 0.00 0  
## 100 0.00 0  
## 105 0.00 0  
## 115 0.00 0  
## 131 0.00 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.00 0.00 68.09 -17.38 -22.93 -15.24 -22.93 10.39   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.35 35.59 0.066 0.950  
## CountryURT 50.74 50.32 1.008 0.360  
## CountryZIM 20.59 38.44 0.536 0.615  
##   
## (Dispersion parameter for gaussian family taken to be 1266.263)  
##   
## Null deviance: 7652.9 on 7 degrees of freedom  
## Residual deviance: 6331.3 on 5 degrees of freedom  
## AIC: 84.094  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 1.0437 2 0.5934

#-----------------------------------------------  
data\_gp <- subset(data, Species=="Gp")  
data\_gp

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc  
## 1 ETH Arba minch, nech SAFr Gp NI 1 20.48 20.04 6.10  
## 5 KEN Katotoi Gp NI 5 42.56 88.72 21.54  
## 6 KEN Mwea Gp NI 6 3.08 19.49 7.18  
## 8 ZAM Mfuwe Gp NI 8 2.05 45.21 1.37  
## 9 URT URTzania Gp NI 9 78.77 19.86 6.16  
## 17 KEN Kari Gp NI 17 89.36 2.13 1.06  
## 19 KEN Koibos Gp NI 19 0.00 71.59 15.91  
## 20 KEN Meru nat. parc Gp NI 20 22.99 70.11 29.89  
## 23 KEN Ruma nat. parc Gp NI 23 26.25 17.50 10.00  
## 31 URT MaSAFng-URTga Gp NI 31 66.20 73.24 33.80  
## 38 KEN Emsos Gp NI 38 0.00 93.33 15.00  
## 42 UGA Budaka Gp NI 42 94.55 7.27 1.82  
## 60 ZIM Makuti Gp NI 60 15.79 86.84 7.89  
## 79 UGA Omugo Gp NI 79 100.00 0.00 0.00  
## 81 ZIM Mushumb Gp NI 81 3.85 19.23 3.85  
## 85 UGA Lira Gp NI 85 0.00 16.00 8.00  
## 90 KEN Kiria Gp NI 90 0.00 80.00 55.00  
## 101 KEN Mwea nat. parc Gp NI 101 0.00 13.33 13.33  
## 118 UGA Moyo Gp NI 118 87.50 12.50 0.00  
## 139 ZIM Rukomeshi Gp NI 139 0.00 0.00 0.00  
## 140 ZIM Gokwe Gp NI 140 0.00 0.00 0.00  
## Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 1 0.65 1.09 10.46 0.00 0.00 0.65 0.00  
## 5 15.38 0.51 26.15 6.67 1.54 15.90 1.03  
## 6 0.51 1.03 7.69 1.03 0.51 0.51 0.00  
## 8 0.68 0.68 34.93 0.00 0.00 7.53 0.00  
## 9 2.74 0.68 8.22 0.00 0.00 0.68 0.00  
## 17 0.00 1.06 0.00 0.00 0.00 0.00 0.00  
## 19 9.09 0.00 28.41 0.00 0.00 15.91 0.00  
## 20 4.60 0.00 25.29 0.00 0.00 10.34 0.00  
## 23 2.50 2.50 0.00 1.25 0.00 0.00 0.00  
## 31 0.00 0.00 14.08 0.00 1.41 21.13 1.41  
## 38 8.33 0.00 58.33 1.67 0.00 10.00 0.00  
## 42 0.00 0.00 5.45 0.00 0.00 0.00 0.00  
## 60 0.00 0.00 73.68 0.00 0.00 5.26 0.00  
## 79 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 81 0.00 7.69 3.85 0.00 0.00 3.85 0.00  
## 85 0.00 4.00 4.00 0.00 0.00 0.00 0.00  
## 90 5.00 0.00 10.00 10.00 0.00 0.00 0.00  
## 101 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 118 0.00 0.00 12.50 0.00 0.00 0.00 0.00  
## 139 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 140 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 1 0.44 0.65 0  
## 5 0.00 0.00 0  
## 6 0.00 1.03 0  
## 8 0.00 0.00 0  
## 9 0.68 0.68 0  
## 17 0.00 0.00 0  
## 19 0.00 2.27 0  
## 20 0.00 0.00 0  
## 23 1.25 0.00 0  
## 31 0.00 1.41 0  
## 38 0.00 0.00 0  
## 42 0.00 0.00 0  
## 60 0.00 0.00 0  
## 79 0.00 0.00 0  
## 81 0.00 0.00 0  
## 85 0.00 0.00 0  
## 90 0.00 0.00 0  
## 101 0.00 0.00 0  
## 118 0.00 0.00 0  
## 139 0.00 0.00 0  
## 140 0.00 0.00 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -48.56 -26.52 0.00 20.90 60.32   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 20.040 34.093 0.588 0.565  
## CountryKEN 30.649 35.937 0.853 0.407  
## CountryUGA -11.097 38.117 -0.291 0.775  
## CountryURT 26.510 41.755 0.635 0.535  
## CountryZAM 25.170 48.214 0.522 0.609  
## CountryZIM 6.478 38.117 0.170 0.867  
##   
## (Dispersion parameter for gaussian family taken to be 1162.303)  
##   
## Null deviance: 23227 on 20 degrees of freedom  
## Residual deviance: 17435 on 15 degrees of freedom  
## AIC: 214.75  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 4.9833 5 0.4179

#-----------------------------------------------  
data\_gpg <- subset(data, Species=="Gpg")  
data\_gpg

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc  
## 4 SEN Pout Gpg NI 4 0.00 7.04 1.51  
## 12 BKF Folonzo Gpg F 12 0.00 7.55 0.94  
## 13 BKF Folonzo Gpg M 13 1.89 16.04 0.00  
## 15 GUI Kangoliya Gpg F 15 95.74 0.00 0.00  
## 18 SEN Kayar Gpg NI 18 0.00 1.14 0.00  
## 25 BKF Moussodougou Gpg F 25 0.00 44.87 0.00  
## 30 BKF Comoe Gpg F 30 0.00 2.82 1.41  
## 32 BKF Kartasso Gpg F 32 0.00 0.00 0.00  
## 33 BKF Kartasso Gpg M 33 0.00 0.00 0.00  
## 34 SEN DiackSAFo Peulh Gpg NI 34 0.00 7.69 0.00  
## 35 BKF Moussodougou Gpg M 35 0.00 21.88 0.00  
## 40 MLI Bani Gpg F 40 0.00 1.72 0.00  
## 45 BKF Kampty Gpg F 45 0.00 90.57 1.89  
## 47 BKF Comoe Gpg M 47 0.00 1.92 1.92  
## 48 MLI SEN Gpg M 48 0.00 7.69 1.92  
## 54 BKF Bama Gpg F 54 0.00 0.00 0.00  
## 56 SEN Tambacounda Gpg F 56 0.00 41.46 0.00  
## 57 SEN Tambacounda Gpg M 57 0.00 71.79 0.00  
## 58 SEN SebikoURTe Gpg NI 58 0.00 5.13 0.00  
## 62 MLI SEN Gpg F 62 0.00 0.00 0.00  
## 64 BKF Bama Gpg M 64 0.00 0.00 0.00  
## 65 MLI Banco Gpg F 65 0.00 20.59 0.00  
## 66 BKF Dedougou Gpg F 66 0.00 52.94 0.00  
## 67 MLI Sikasso Gpg F 67 0.00 6.06 0.00  
## 71 GUI Kangoliya Gpg M 71 0.00 0.00 0.00  
## 77 GUI Mini Gpg F 77 0.00 3.45 0.00  
## 78 SEN Hann Gpg NI 78 0.00 0.00 0.00  
## 80 BKF Kampty Gpg M 80 0.00 80.77 0.00  
## 82 GUI Kifala Gpg M 82 0.00 0.00 0.00  
## 83 MLI Sikasso Gpg M 83 0.00 0.00 0.00  
## 84 MLI SS Gpg F 84 0.00 4.00 0.00  
## 86 BKF Kenedougou Gpg F 86 0.00 0.00 0.00  
## 87 MLI SS Gpg M 87 0.00 0.00 0.00  
## 88 BKF Dedougou Gpg M 88 0.00 69.57 4.35  
## 89 GUI Bafing Gpg F 89 0.00 5.00 0.00  
## 91 BKF Kampty Gpg NI 91 0.00 84.21 0.00  
## 92 GUI Tinkisso Gpg M 92 0.00 5.56 0.00  
## 94 BKF Kenedougou Gpg M 94 0.00 0.00 0.00  
## 96 GUI Dekonkore Gpg F 96 0.00 6.25 0.00  
## 97 GUI Mini Gpg M 97 0.00 0.00 0.00  
## 98 SEN Fleuve Gambie Gpg M 98 0.00 43.75 0.00  
## 102 GUI Bafing Gpg M 102 0.00 0.00 0.00  
## 103 GUI Tinkisso Gpg F 103 0.00 7.69 0.00  
## 104 BKF Bouroum bouroum Gpg F 104 0.00 92.31 0.00  
## 106 GUI Karifale Gpg M 106 0.00 8.33 0.00  
## 107 GUI Lemonako Gpg F 107 0.00 0.00 0.00  
## 108 BKF KouriGUIon Gpg F 108 0.00 50.00 0.00  
## 109 MLI Bani Gpg M 109 0.00 0.00 0.00  
## 110 MLI Sybi Gpg F 110 0.00 0.00 0.00  
## 111 MLI Sybi Gpg M 111 0.00 0.00 0.00  
## 113 SEN Fleueve G Gpg F 113 0.00 11.11 0.00  
## 114 BKF KouriGUIon Gpg NI 114 0.00 22.22 0.00  
## 117 GUI Lemonako Gpg M 117 0.00 0.00 0.00  
## 119 SEN Diaguiri Gpg F 119 0.00 0.00 0.00  
## 120 MLI Banco Gpg M 120 0.00 28.57 0.00  
## 121 MLI Baoule Gpg F 121 0.00 42.86 0.00  
## 122 MLI Baoule Gpg M 122 0.00 42.86 0.00  
## 123 MLI Bougouni Gpg M 123 0.00 0.00 0.00  
## 124 BKF Lorepeni Gpg F 124 0.00 71.43 0.00  
## 127 SEN MousSAFlla Gpg M 127 0.00 0.00 0.00  
## 128 MLI Baguineda Gpg F 128 0.00 16.67 0.00  
## 129 MLI Bougouni Gpg F 129 0.00 0.00 0.00  
## 130 MLI Kita Gpg M 130 0.00 16.67 0.00  
## 136 GUI Kifala Gpg F 136 0.00 0.00 0.00  
## 137 BKF Bouroum bouroum Gpg M 137 0.00 80.00 0.00  
## 138 SEN Fleuve Gambie Gpg F 138 0.00 25.00 0.00  
## 143 SEN Niokolo Gpg M 143 0.00 0.00 0.00  
## 145 BKF Lorepeni Gpg M 145 0.00 100.00 0.00  
## 146 BKF KouriGUIon Gpg M 146 0.00 66.67 0.00  
## 147 BKF Ouarkoye Gpg M 147 0.00 100.00 0.00  
## 150 SEN Diaguiri Gpg M 150 0.00 50.00 0.00  
## 151 BKF Ouarkoye Gpg F 151 0.00 100.00 50.00  
## 156 GUI Karifale Gpg F 156 0.00 0.00 0.00  
## 157 SEN Mako Gpg M 157 0.00 100.00 0.00  
## Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 4 2.01 0.50 3.02 0 0.00 0.00 0.00  
## 12 2.83 1.89 0.00 0 0.00 0.00 1.89  
## 13 5.66 5.66 0.00 0 1.89 0.00 2.83  
## 15 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 18 0.00 0.00 1.14 0 0.00 0.00 0.00  
## 25 20.51 12.82 0.00 0 0.00 0.00 11.54  
## 30 1.41 0.00 0.00 0 0.00 0.00 0.00  
## 32 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 33 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 34 1.54 1.54 4.62 0 0.00 0.00 0.00  
## 35 6.25 15.63 0.00 0 0.00 0.00 0.00  
## 40 1.72 0.00 0.00 0 0.00 0.00 0.00  
## 45 62.26 1.89 11.32 0 0.00 0.00 0.00  
## 47 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 48 1.92 3.85 0.00 0 0.00 0.00 0.00  
## 54 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 56 26.83 7.32 0.00 0 0.00 0.00 7.32  
## 57 53.85 2.56 0.00 0 0.00 0.00 15.38  
## 58 5.13 0.00 0.00 0 0.00 0.00 0.00  
## 62 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 64 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 65 20.59 0.00 0.00 0 0.00 0.00 0.00  
## 66 26.47 0.00 23.53 0 0.00 0.00 0.00  
## 67 0.00 6.06 0.00 0 0.00 0.00 0.00  
## 71 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 77 3.45 0.00 0.00 0 0.00 0.00 0.00  
## 78 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 80 65.38 0.00 7.69 0 0.00 0.00 0.00  
## 82 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 83 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 84 4.00 0.00 0.00 0 0.00 0.00 0.00  
## 86 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 87 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 88 30.43 13.04 4.35 0 0.00 4.35 0.00  
## 89 5.00 0.00 0.00 0 0.00 0.00 0.00  
## 91 26.32 5.26 21.05 0 0.00 0.00 0.00  
## 92 5.56 0.00 0.00 0 0.00 0.00 0.00  
## 94 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 96 6.25 0.00 0.00 0 0.00 0.00 0.00  
## 97 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 98 43.75 0.00 0.00 0 0.00 0.00 0.00  
## 102 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 103 7.69 0.00 0.00 0 0.00 0.00 0.00  
## 104 53.85 0.00 23.08 0 0.00 0.00 0.00  
## 106 8.33 0.00 0.00 0 0.00 0.00 0.00  
## 107 8.33 0.00 0.00 0 0.00 0.00 0.00  
## 108 0.00 0.00 33.33 0 0.00 0.00 0.00  
## 109 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 110 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 111 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 113 11.11 0.00 0.00 0 0.00 0.00 0.00  
## 114 0.00 0.00 11.11 0 0.00 0.00 0.00  
## 117 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 119 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 120 28.57 0.00 0.00 0 0.00 0.00 0.00  
## 121 42.86 0.00 0.00 0 0.00 0.00 0.00  
## 122 42.86 0.00 0.00 0 0.00 0.00 0.00  
## 123 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 124 14.29 0.00 28.57 0 0.00 0.00 0.00  
## 127 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 128 16.67 0.00 0.00 0 0.00 0.00 0.00  
## 129 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 130 16.67 0.00 0.00 0 0.00 0.00 0.00  
## 136 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 137 40.00 0.00 20.00 0 0.00 0.00 0.00  
## 138 25.00 0.00 0.00 0 0.00 0.00 0.00  
## 143 66.67 0.00 0.00 0 0.00 0.00 0.00  
## 145 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 146 33.33 0.00 0.00 0 0.00 0.00 0.00  
## 147 33.33 0.00 0.00 0 0.00 0.00 0.00  
## 150 0.00 50.00 0.00 0 0.00 0.00 0.00  
## 151 50.00 0.00 0.00 0 0.00 0.00 0.00  
## 156 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 157 100.00 0.00 0.00 0 0.00 0.00 0.00  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 4 0.00 0.00 0  
## 12 0.00 0.00 0  
## 13 0.00 0.00 0  
## 15 0.00 0.00 0  
## 18 0.00 0.00 0  
## 25 0.00 0.00 0  
## 30 0.00 0.00 0  
## 32 0.00 0.00 0  
## 33 0.00 0.00 0  
## 34 0.00 0.00 0  
## 35 0.00 0.00 0  
## 40 0.00 0.00 0  
## 45 9.43 3.77 0  
## 47 0.00 0.00 0  
## 48 0.00 0.00 0  
## 54 0.00 0.00 0  
## 56 0.00 0.00 0  
## 57 0.00 0.00 0  
## 58 0.00 0.00 0  
## 62 0.00 0.00 0  
## 64 0.00 0.00 0  
## 65 0.00 0.00 0  
## 66 2.94 0.00 0  
## 67 0.00 0.00 0  
## 71 0.00 0.00 0  
## 77 0.00 0.00 0  
## 78 0.00 0.00 0  
## 80 7.69 0.00 0  
## 82 0.00 0.00 0  
## 83 0.00 0.00 0  
## 84 0.00 0.00 0  
## 86 0.00 0.00 0  
## 87 0.00 0.00 0  
## 88 4.35 8.70 0  
## 89 0.00 0.00 0  
## 91 31.58 0.00 0  
## 92 0.00 0.00 0  
## 94 0.00 0.00 0  
## 96 0.00 0.00 0  
## 97 0.00 0.00 0  
## 98 0.00 0.00 0  
## 102 0.00 0.00 0  
## 103 0.00 0.00 0  
## 104 15.38 0.00 0  
## 106 0.00 0.00 0  
## 107 0.00 0.00 0  
## 108 16.67 0.00 0  
## 109 0.00 0.00 0  
## 110 0.00 0.00 0  
## 111 0.00 0.00 0  
## 113 0.00 0.00 0  
## 114 11.11 0.00 0  
## 117 0.00 0.00 0  
## 119 0.00 0.00 0  
## 120 0.00 0.00 0  
## 121 0.00 0.00 0  
## 122 0.00 0.00 0  
## 123 0.00 0.00 0  
## 124 28.57 0.00 0  
## 127 0.00 0.00 0  
## 128 0.00 0.00 0  
## 129 0.00 0.00 0  
## 130 0.00 0.00 0  
## 136 0.00 0.00 0  
## 137 20.00 0.00 0  
## 138 0.00 0.00 0  
## 143 0.00 0.00 0  
## 145 66.67 33.33 0  
## 146 33.33 0.00 0  
## 147 33.33 33.33 0  
## 150 0.00 0.00 0  
## 151 0.00 0.00 0  
## 156 0.00 0.00 0  
## 157 0.00 0.00 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -44.453 -17.072 -2.419 15.430 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 44.453 5.521 8.052 1.47e-11 \*\*\*  
## CountryGUI -42.034 9.127 -4.605 1.79e-05 \*\*\*  
## CountryMLI -34.025 8.632 -3.942 0.000189 \*\*\*  
## CountrySEN -20.179 9.127 -2.211 0.030320 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 792.4573)  
##   
## Null deviance: 76638 on 73 degrees of freedom  
## Residual deviance: 55472 on 70 degrees of freedom  
## AIC: 709.85  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 26.709 3 6.776e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-----------------------------------------------  
data\_gt <- subset(data, Species=="Gt")  
data\_gt

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 2 BKF Comoe Gt F 2 0 16.54 1.10 13.24  
## 3 BKF Comoe Gt M 3 0 15.00 3.64 11.36  
## 11 BKF Folonzo Gt F 11 0 18.87 1.89 12.26  
## 14 BKF Folonzo Gt M 14 0 32.63 2.11 27.37  
## 24 GHA Walewale Gt M 24 0 53.85 3.85 12.82  
## 43 GHA Walewale Gt F 43 0 66.04 1.89 9.43  
## 44 BKF Arly Gt F 44 0 1.89 0.00 0.00  
## 55 BKF Arly Gt M 55 0 0.00 0.00 0.00  
## 69 GHA MorURTi Gt M 69 0 50.00 0.00 15.63  
## 70 BKF Sissili Gt M 70 0 25.00 12.50 12.50  
## 95 GHA Bougouhiya Gt F 95 0 18.75 0.00 6.25  
## 99 BKF Sissili Gt F 99 0 13.33 6.67 6.67  
## 112 GHA MorURTi Gt F 112 0 66.67 0.00 0.00  
## 116 GHA Fumbissi Gt F 116 0 100.00 0.00 0.00  
## 125 GHA Fumbissi Gt M 125 0 100.00 0.00 66.67  
## 126 GHA Grogro Gt M 126 0 100.00 0.00 0.00  
## 133 GHA Grogro Gt F 133 0 100.00 0.00 80.00  
## 134 GHA Kumpole Gt F 134 0 100.00 0.00 40.00  
## 135 GHA Sissili Bidge Gt F 135 0 100.00 0.00 20.00  
## 142 GHA Bougouhiya Gt M 142 0 0.00 0.00 0.00  
## 148 GHA Kumpole Gt M 148 0 100.00 0.00 50.00  
## 149 GHA Psikp\_ Gt M 149 0 100.00 0.00 0.00  
## 152 GHA Kandiaga Gt M 152 0 100.00 0.00 0.00  
## 153 GHA Sissili Bidge Gt M 153 0 100.00 0.00 0.00  
## 154 GHA Nabogo Gt F 154 0 0.00 0.00 0.00  
## 155 GHA Volta Blanche Gt F 155 0 0.00 0.00 0.00  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 2 0.37 0 0.74 1.10 0 0.00 0  
## 3 0.00 0 0.00 0.00 0 0.00 0  
## 11 1.89 0 1.89 0.94 0 0.00 0  
## 14 1.05 0 0.00 1.05 0 1.05 0  
## 24 8.97 0 0.00 10.26 0 14.10 0  
## 43 24.53 0 0.00 16.98 0 7.55 0  
## 44 1.89 0 0.00 0.00 0 0.00 0  
## 55 0.00 0 0.00 0.00 0 0.00 0  
## 69 15.63 0 0.00 18.75 0 0.00 0  
## 70 0.00 0 0.00 0.00 0 0.00 0  
## 95 0.00 0 0.00 0.00 0 12.50 0  
## 99 0.00 0 0.00 0.00 0 0.00 0  
## 112 33.33 0 0.00 22.22 0 11.11 0  
## 116 37.50 0 0.00 0.00 0 62.50 0  
## 125 33.33 0 0.00 0.00 0 0.00 0  
## 126 16.67 0 0.00 0.00 0 83.33 0  
## 133 20.00 0 0.00 0.00 0 0.00 0  
## 134 60.00 0 0.00 0.00 0 0.00 0  
## 135 80.00 0 0.00 0.00 0 0.00 0  
## 142 0.00 0 0.00 0.00 0 0.00 0  
## 148 50.00 0 0.00 0.00 0 0.00 0  
## 149 50.00 0 0.00 0.00 0 50.00 0  
## 152 100.00 0 0.00 0.00 0 0.00 0  
## 153 100.00 0 0.00 0.00 0 0.00 0  
## 154 0.00 0 0.00 0.00 0 0.00 0  
## 155 0.00 0 0.00 0.00 0 0.00 0  
## Prev\_TzTsg Prev\_TcTvTz  
## 2 0 0.00  
## 3 0 0.00  
## 11 0 0.00  
## 14 0 0.00  
## 24 0 1.28  
## 43 0 5.66  
## 44 0 0.00  
## 55 0 0.00  
## 69 0 0.00  
## 70 0 0.00  
## 95 0 0.00  
## 99 0 0.00  
## 112 0 0.00  
## 116 0 0.00  
## 125 0 0.00  
## 126 0 0.00  
## 133 0 0.00  
## 134 0 0.00  
## 135 0 0.00  
## 142 0 0.00  
## 148 0 0.00  
## 149 0 0.00  
## 152 0 0.00  
## 153 0 0.00  
## 154 0 0.00  
## 155 0 0.00

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -14.935 2.298 30.261 30.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 15.41 12.04 1.280 0.212940   
## CountryGHA 54.33 14.47 3.754 0.000978 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1159.976)  
##   
## Null deviance: 44189 on 25 degrees of freedom  
## Residual deviance: 27839 on 24 degrees of freedom  
## AIC: 261.16  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 14.095 1 0.0001738 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#------------------------------------------------------  
# all species  
  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 35.627 4.536 7.855 9.24e-13 \*\*\*  
## CountryETH -15.587 30.088 -0.518 0.605225   
## CountryGHA 34.112 8.350 4.085 7.35e-05 \*\*\*  
## CountryGUI -33.209 8.919 -3.723 0.000284 \*\*\*  
## CountryKEN 6.128 9.711 0.631 0.529059   
## CountryMLI -25.200 8.350 -3.018 0.003021 \*\*   
## CountryMOZ -27.627 21.516 -1.284 0.201227   
## CountrySAF -14.495 11.453 -1.266 0.207727   
## CountrySEN -11.353 8.919 -1.273 0.205148   
## CountrySWA -35.627 30.088 -1.184 0.238360   
## CountryUGA -26.345 14.054 -1.875 0.062918 .   
## CountryURT -5.429 12.962 -0.419 0.675975   
## CountryZAI -32.767 30.088 -1.089 0.277985   
## CountryZAM 9.583 30.088 0.318 0.750587   
## CountryZIM -11.259 10.442 -1.078 0.282769   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 63.56 14 2.76e-08 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Statistics for Table 2

#Glm Tspp per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 35.627 4.536 7.855 9.24e-13 \*\*\*  
## CountryETH -15.587 30.088 -0.518 0.605225   
## CountryGHA 34.112 8.350 4.085 7.35e-05 \*\*\*  
## CountryGUI -33.209 8.919 -3.723 0.000284 \*\*\*  
## CountryKEN 6.128 9.711 0.631 0.529059   
## CountryMLI -25.200 8.350 -3.018 0.003021 \*\*   
## CountryMOZ -27.627 21.516 -1.284 0.201227   
## CountrySAF -14.495 11.453 -1.266 0.207727   
## CountrySEN -11.353 8.919 -1.273 0.205148   
## CountrySWA -35.627 30.088 -1.184 0.238360   
## CountryUGA -26.345 14.054 -1.875 0.062918 .   
## CountryURT -5.429 12.962 -0.419 0.675975   
## CountryZAI -32.767 30.088 -1.089 0.277985   
## CountryZAM 9.583 30.088 0.318 0.750587   
## CountryZIM -11.259 10.442 -1.078 0.282769   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 69.739 7.011 9.948 < 2e-16 \*\*\*  
## CountryBKF -34.112 8.350 -4.085 7.35e-05 \*\*\*  
## CountryETH -49.699 30.559 -1.626 0.106109   
## CountryGUI -67.321 10.399 -6.474 1.47e-09 \*\*\*  
## CountryKEN -27.984 11.085 -2.525 0.012692 \*   
## CountryMLI -59.312 9.915 -5.982 1.72e-08 \*\*\*  
## CountryMOZ -61.739 22.170 -2.785 0.006092 \*\*   
## CountrySAF -48.607 12.639 -3.846 0.000181 \*\*\*  
## CountrySEN -45.465 10.399 -4.372 2.37e-05 \*\*\*  
## CountrySWA -69.739 30.559 -2.282 0.023979 \*   
## CountryUGA -60.457 15.036 -4.021 9.41e-05 \*\*\*  
## CountryURT -39.541 14.021 -2.820 0.005494 \*\*   
## CountryZAI -66.879 30.559 -2.189 0.030277 \*   
## CountryZAM -24.529 30.559 -0.803 0.423504   
## CountryZIM -45.371 11.731 -3.868 0.000167 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.4187 7.6799 0.315 0.753275   
## CountryGHA 67.3208 10.3986 6.474 1.47e-09 \*\*\*  
## CountryBKF 33.2088 8.9193 3.723 0.000284 \*\*\*  
## CountryETH 17.6213 30.7194 0.574 0.567137   
## CountryKEN 39.3363 11.5198 3.415 0.000834 \*\*\*  
## CountryMLI 8.0086 10.3986 0.770 0.442494   
## CountryMOZ 5.5813 22.3904 0.249 0.803512   
## CountrySAF 18.7138 13.0218 1.437 0.152901   
## CountrySEN 21.8553 10.8610 2.012 0.046095 \*   
## CountrySWA -2.4187 30.7194 -0.079 0.937356   
## CountryUGA 6.8633 15.3597 0.447 0.655676   
## CountryURT 27.7797 14.3677 1.933 0.055181 .   
## CountryZAI 0.4413 30.7194 0.014 0.988558   
## CountryZAM 42.7913 30.7194 1.393 0.165820   
## CountryZIM 21.9493 12.1429 1.808 0.072803 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 20.040 29.744 0.674 0.502  
## CountryGUI -17.621 30.719 -0.574 0.567  
## CountryGHA 49.699 30.559 1.626 0.106  
## CountryBKF 15.587 30.088 0.518 0.605  
## CountryKEN 21.715 30.958 0.701 0.484  
## CountryMLI -9.613 30.559 -0.315 0.754  
## CountryMOZ -12.040 36.429 -0.331 0.742  
## CountrySAF 1.092 31.548 0.035 0.972  
## CountrySEN 4.234 30.719 0.138 0.891  
## CountrySWA -20.040 42.064 -0.476 0.635  
## CountryUGA -10.758 32.583 -0.330 0.742  
## CountryURT 10.158 32.127 0.316 0.752  
## CountryZAI -17.180 42.064 -0.408 0.684  
## CountryZAM 25.170 42.064 0.598 0.551  
## CountryZIM 4.328 31.196 0.139 0.890  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 41.755 8.586 4.863 3.05e-06 \*\*\*  
## CountryETH -21.715 30.958 -0.701 0.484195   
## CountryGUI -39.336 11.520 -3.415 0.000834 \*\*\*  
## CountryGHA 27.984 11.085 2.525 0.012692 \*   
## CountryBKF -6.128 9.711 -0.631 0.529059   
## CountryMLI -31.328 11.085 -2.826 0.005396 \*\*   
## CountryMOZ -33.755 22.717 -1.486 0.139546   
## CountrySAF -20.622 13.576 -1.519 0.130997   
## CountrySEN -17.481 11.520 -1.517 0.131385   
## CountrySWA -41.755 30.958 -1.349 0.179582   
## CountryUGA -32.473 15.832 -2.051 0.042114 \*   
## CountryURT -11.557 14.872 -0.777 0.438415   
## CountryZAI -38.895 30.958 -1.256 0.211063   
## CountryZAM 3.455 30.958 0.112 0.911298   
## CountryZIM -17.387 12.736 -1.365 0.174356   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 10.427 7.011 1.487 0.13916   
## CountryKEN 31.328 11.085 2.826 0.00540 \*\*   
## CountryETH 9.613 30.559 0.315 0.75356   
## CountryGUI -8.009 10.399 -0.770 0.44249   
## CountryGHA 59.312 9.915 5.982 1.72e-08 \*\*\*  
## CountryBKF 25.200 8.350 3.018 0.00302 \*\*   
## CountryMOZ -2.427 22.170 -0.109 0.91297   
## CountrySAF 10.705 12.639 0.847 0.39842   
## CountrySEN 13.847 10.399 1.332 0.18514   
## CountrySWA -10.427 30.559 -0.341 0.73345   
## CountryUGA -1.145 15.036 -0.076 0.93940   
## CountryURT 19.771 14.021 1.410 0.16072   
## CountryZAI -7.567 30.559 -0.248 0.80478   
## CountryZAM 34.783 30.559 1.138 0.25696   
## CountryZIM 13.941 11.731 1.188 0.23669   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 8.000 21.032 0.380 0.70424   
## CountryMLI 2.427 22.170 0.109 0.91297   
## CountryKEN 33.755 22.717 1.486 0.13955   
## CountryETH 12.040 36.429 0.331 0.74151   
## CountryGUI -5.581 22.390 -0.249 0.80351   
## CountryGHA 61.739 22.170 2.785 0.00609 \*\*  
## CountryBKF 27.627 21.516 1.284 0.20123   
## CountrySAF 13.132 23.515 0.558 0.57740   
## CountrySEN 16.274 22.390 0.727 0.46854   
## CountrySWA -8.000 36.429 -0.220 0.82650   
## CountryUGA 1.282 24.886 0.052 0.95899   
## CountryURT 22.198 24.286 0.914 0.36225   
## CountryZAI -5.140 36.429 -0.141 0.88799   
## CountryZAM 37.210 36.429 1.021 0.30879   
## CountryZIM 16.368 23.040 0.710 0.47861   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.8600 29.7439 0.096 0.9235   
## CountryMOZ 5.1400 36.4287 0.141 0.8880   
## CountryMLI 7.5672 30.5590 0.248 0.8048   
## CountryKEN 38.8950 30.9585 1.256 0.2111   
## CountryETH 17.1800 42.0643 0.408 0.6836   
## CountryGUI -0.4413 30.7194 -0.014 0.9886   
## CountryGHA 66.8794 30.5590 2.189 0.0303 \*  
## CountryBKF 32.7674 30.0878 1.089 0.2780   
## CountrySAF 18.2725 31.5482 0.579 0.5634   
## CountrySEN 21.4140 30.7194 0.697 0.4869   
## CountrySWA -2.8600 42.0643 -0.068 0.9459   
## CountryUGA 6.4220 32.5829 0.197 0.8440   
## CountryURT 27.3383 32.1271 0.851 0.3962   
## CountryZAM 42.3500 42.0643 1.007 0.3158   
## CountryZIM 21.5080 31.1957 0.689 0.4917   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 24.274 7.680 3.161 0.00193 \*\*   
## CountryZAI -21.414 30.719 -0.697 0.48690   
## CountryMOZ -16.274 22.390 -0.727 0.46854   
## CountryMLI -13.847 10.399 -1.332 0.18514   
## CountryKEN 17.481 11.520 1.517 0.13139   
## CountryETH -4.234 30.719 -0.138 0.89057   
## CountryGUI -21.855 10.861 -2.012 0.04609 \*   
## CountryGHA 45.465 10.399 4.372 2.37e-05 \*\*\*  
## CountryBKF 11.353 8.919 1.273 0.20515   
## CountrySAF -3.142 13.022 -0.241 0.80971   
## CountrySWA -24.274 30.719 -0.790 0.43075   
## CountryUGA -14.992 15.360 -0.976 0.33071   
## CountryURT 5.924 14.368 0.412 0.68072   
## CountryZAM 20.936 30.719 0.682 0.49666   
## CountryZIM 0.094 12.143 0.008 0.99383   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.935e-13 2.974e+01 0.000 1.000   
## CountrySEN 2.427e+01 3.072e+01 0.790 0.431   
## CountryZAI 2.860e+00 4.206e+01 0.068 0.946   
## CountryMOZ 8.000e+00 3.643e+01 0.220 0.826   
## CountryMLI 1.043e+01 3.056e+01 0.341 0.733   
## CountryKEN 4.175e+01 3.096e+01 1.349 0.180   
## CountryETH 2.004e+01 4.206e+01 0.476 0.635   
## CountryGUI 2.419e+00 3.072e+01 0.079 0.937   
## CountryGHA 6.974e+01 3.056e+01 2.282 0.024 \*  
## CountryBKF 3.563e+01 3.009e+01 1.184 0.238   
## CountrySAF 2.113e+01 3.155e+01 0.670 0.504   
## CountryUGA 9.282e+00 3.258e+01 0.285 0.776   
## CountryURT 3.020e+01 3.213e+01 0.940 0.349   
## CountryZAM 4.521e+01 4.206e+01 1.075 0.284   
## CountryZIM 2.437e+01 3.120e+01 0.781 0.436   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 30.198 12.143 2.487 0.01405 \*   
## CountrySWA -30.198 32.127 -0.940 0.34884   
## CountrySEN -5.924 14.368 -0.412 0.68072   
## CountryZAI -27.338 32.127 -0.851 0.39624   
## CountryMOZ -22.198 24.286 -0.914 0.36225   
## CountryMLI -19.771 14.021 -1.410 0.16072   
## CountryKEN 11.557 14.872 0.777 0.43842   
## CountryETH -10.158 32.127 -0.316 0.75232   
## CountryGUI -27.780 14.368 -1.933 0.05518 .   
## CountryGHA 39.541 14.021 2.820 0.00549 \*\*  
## CountryBKF 5.429 12.962 0.419 0.67597   
## CountrySAF -9.066 16.064 -0.564 0.57340   
## CountryUGA -20.916 18.011 -1.161 0.24747   
## CountryZAM 15.012 32.127 0.467 0.64104   
## CountryZIM -5.830 15.360 -0.380 0.70482   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 9.282 13.302 0.698 0.4865   
## CountryURT 20.916 18.011 1.161 0.2475   
## CountrySWA -9.282 32.583 -0.285 0.7762   
## CountrySEN 14.992 15.360 0.976 0.3307   
## CountryZAI -6.422 32.583 -0.197 0.8440   
## CountryMOZ -1.282 24.886 -0.052 0.9590   
## CountryMLI 1.145 15.036 0.076 0.9394   
## CountryKEN 32.473 15.832 2.051 0.0421 \*   
## CountryETH 10.758 32.583 0.330 0.7418   
## CountryGUI -6.863 15.360 -0.447 0.6557   
## CountryGHA 60.457 15.036 4.021 9.41e-05 \*\*\*  
## CountryBKF 26.345 14.054 1.875 0.0629 .   
## CountrySAF 11.850 16.957 0.699 0.4858   
## CountryZAM 35.928 32.583 1.103 0.2721   
## CountryZIM 15.086 16.291 0.926 0.3560   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 21.133 10.516 2.010 0.046388 \*   
## CountryUGA -11.850 16.957 -0.699 0.485784   
## CountryURT 9.066 16.064 0.564 0.573397   
## CountrySWA -21.133 31.548 -0.670 0.504050   
## CountrySEN 3.141 13.022 0.241 0.809713   
## CountryZAI -18.272 31.548 -0.579 0.563383   
## CountryMOZ -13.132 23.515 -0.558 0.577401   
## CountryMLI -10.705 12.639 -0.847 0.398419   
## CountryKEN 20.623 13.576 1.519 0.130997   
## CountryETH -1.092 31.548 -0.035 0.972424   
## CountryGUI -18.714 13.022 -1.437 0.152901   
## CountryGHA 48.607 12.639 3.846 0.000181 \*\*\*  
## CountryBKF 14.495 11.453 1.266 0.207727   
## CountryZAM 24.077 31.548 0.763 0.446621   
## CountryZIM 3.235 14.109 0.229 0.818949   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 45.210 29.744 1.520 0.131  
## CountrySAF -24.078 31.548 -0.763 0.447  
## CountryUGA -35.928 32.583 -1.103 0.272  
## CountryURT -15.012 32.127 -0.467 0.641  
## CountrySWA -45.210 42.064 -1.075 0.284  
## CountrySEN -20.936 30.719 -0.682 0.497  
## CountryZAI -42.350 42.064 -1.007 0.316  
## CountryMOZ -37.210 36.429 -1.021 0.309  
## CountryMLI -34.783 30.559 -1.138 0.257  
## CountryKEN -3.455 30.958 -0.112 0.911  
## CountryETH -25.170 42.064 -0.598 0.551  
## CountryGUI -42.791 30.719 -1.393 0.166  
## CountryGHA 24.529 30.559 0.803 0.424  
## CountryBKF -9.583 30.088 -0.318 0.751  
## CountryZIM -20.842 31.196 -0.668 0.505  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_Tspp) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -19.625 -2.419 17.636 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 24.368 9.406 2.591 0.010584 \*   
## CountryZAM 20.842 31.196 0.668 0.505159   
## CountrySAF -3.236 14.109 -0.229 0.818949   
## CountryUGA -15.086 16.291 -0.926 0.356024   
## CountryURT 5.830 15.360 0.380 0.704824   
## CountrySWA -24.368 31.196 -0.781 0.436034   
## CountrySEN -0.094 12.143 -0.008 0.993834   
## CountryZAI -21.508 31.196 -0.689 0.491671   
## CountryMOZ -16.368 23.040 -0.710 0.478611   
## CountryMLI -13.941 11.731 -1.188 0.236692   
## CountryKEN 17.387 12.736 1.365 0.174356   
## CountryETH -4.328 31.196 -0.139 0.889856   
## CountryGUI -21.949 12.143 -1.808 0.072803 .   
## CountryGHA 45.371 11.731 3.868 0.000167 \*\*\*  
## CountryBKF 11.259 10.442 1.078 0.282769   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 884.7024)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 124743 on 141 degrees of freedom  
## AIC: 1517.4  
##   
## Number of Fisher Scoring iterations: 2

#--------------------------------------------------------------  
# for Sodalis  
  
# model selection  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_Sod) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_Sod) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_Sod) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_Sod) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model3 27 1296.12 0.00 0.97 0.97 -615.15  
## model4 23 1302.75 6.64 0.03 1.00 -624.19  
## model1 16 1330.18 34.06 0.00 1.00 -647.13  
## model2 11 1346.01 49.90 0.00 1.00 -661.09  
## model6 100 1563.38 267.27 0.00 1.00 -498.05  
## model5 103 1596.16 300.05 0.00 1.00 -489.08

summary(model3)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country \* Species, family = gaussian(),   
## data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -70.512 -0.338 0.000 0.000 89.357   
##   
## Coefficients: (124 not defined because of singularities)  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -59.79500 14.23246 -4.201 4.89e-05 \*\*\*  
## CountryZAM -2.86000 15.28811 -0.187 0.851895   
## CountrySAF 61.07750 15.78949 3.868 0.000173 \*\*\*  
## CountryUGA 65.60250 9.66905 6.785 3.71e-10 \*\*\*  
## CountryURT 67.57500 11.84212 5.706 7.43e-08 \*\*\*  
## CountrySWA 59.79500 19.73687 3.030 0.002955 \*\*   
## CountrySEN 59.72231 15.67139 3.811 0.000213 \*\*\*  
## CountryZAI 71.22500 19.73687 3.609 0.000438 \*\*\*  
## CountryMOZ 59.79500 19.73687 3.030 0.002955 \*\*   
## CountryMLI 59.72231 15.60496 3.827 0.000201 \*\*\*  
## CountryKEN 15.56111 8.21711 1.894 0.060481 .   
## CountryETH 15.57000 15.28811 1.018 0.310361   
## CountryGUI 66.10497 15.67139 4.218 4.58e-05 \*\*\*  
## CountryGHA 59.79500 14.59283 4.098 7.30e-05 \*\*\*  
## CountryBKF 59.79500 15.03115 3.978 0.000115 \*\*\*  
## SpeciesGb 14.00000 19.33810 0.724 0.470391   
## SpeciesGff 63.84389 16.43423 3.885 0.000162 \*\*\*  
## SpeciesGmed 4.67000 8.37364 0.558 0.578007   
## SpeciesGmm 77.01667 15.28811 5.038 1.54e-06 \*\*\*  
## SpeciesGmsm 0.33800 7.79544 0.043 0.965482   
## SpeciesGp 64.70500 12.48269 5.184 8.11e-07 \*\*\*  
## SpeciesGpg 0.07269 5.52849 0.013 0.989529   
## SpeciesGpp NA NA NA NA   
## SpeciesGt NA NA NA NA   
## CountryZAM:SpeciesGb NA NA NA NA   
## CountrySAF:SpeciesGb -14.25250 21.62065 -0.659 0.510928   
## CountryUGA:SpeciesGb NA NA NA NA   
## CountryURT:SpeciesGb NA NA NA NA   
## CountrySWA:SpeciesGb NA NA NA NA   
## CountrySEN:SpeciesGb NA NA NA NA   
## CountryZAI:SpeciesGb NA NA NA NA   
## CountryMOZ:SpeciesGb NA NA NA NA   
## CountryMLI:SpeciesGb NA NA NA NA   
## CountryKEN:SpeciesGb NA NA NA NA   
## CountryETH:SpeciesGb NA NA NA NA   
## CountryGUI:SpeciesGb NA NA NA NA   
## CountryGHA:SpeciesGb NA NA NA NA   
## CountryBKF:SpeciesGb NA NA NA NA   
## CountryZAM:SpeciesGff NA NA NA NA   
## CountrySAF:SpeciesGff NA NA NA NA   
## CountryUGA:SpeciesGff -65.39139 18.65456 -3.505 0.000626 \*\*\*  
## CountryURT:SpeciesGff NA NA NA NA   
## CountrySWA:SpeciesGff NA NA NA NA   
## CountrySEN:SpeciesGff NA NA NA NA   
## CountryZAI:SpeciesGff NA NA NA NA   
## CountryMOZ:SpeciesGff NA NA NA NA   
## CountryMLI:SpeciesGff NA NA NA NA   
## CountryKEN:SpeciesGff NA NA NA NA   
## CountryETH:SpeciesGff NA NA NA NA   
## CountryGUI:SpeciesGff NA NA NA NA   
## CountryGHA:SpeciesGff NA NA NA NA   
## CountryBKF:SpeciesGff NA NA NA NA   
## CountryZAM:SpeciesGmed NA NA NA NA   
## CountrySAF:SpeciesGmed NA NA NA NA   
## CountryUGA:SpeciesGmed NA NA NA NA   
## CountryURT:SpeciesGmed NA NA NA NA   
## CountrySWA:SpeciesGmed NA NA NA NA   
## CountrySEN:SpeciesGmed NA NA NA NA   
## CountryZAI:SpeciesGmed NA NA NA NA   
## CountryMOZ:SpeciesGmed NA NA NA NA   
## CountryMLI:SpeciesGmed NA NA NA NA   
## CountryKEN:SpeciesGmed NA NA NA NA   
## CountryETH:SpeciesGmed NA NA NA NA   
## CountryGUI:SpeciesGmed NA NA NA NA   
## CountryGHA:SpeciesGmed NA NA NA NA   
## CountryBKF:SpeciesGmed NA NA NA NA   
## CountryZAM:SpeciesGmm NA NA NA NA   
## CountrySAF:SpeciesGmm NA NA NA NA   
## CountryUGA:SpeciesGmm NA NA NA NA   
## CountryURT:SpeciesGmm -8.25667 18.93094 -0.436 0.663454   
## CountrySWA:SpeciesGmm NA NA NA NA   
## CountrySEN:SpeciesGmm NA NA NA NA   
## CountryZAI:SpeciesGmm NA NA NA NA   
## CountryMOZ:SpeciesGmm NA NA NA NA   
## CountryMLI:SpeciesGmm NA NA NA NA   
## CountryKEN:SpeciesGmm 30.74722 16.90164 1.819 0.071184 .   
## CountryETH:SpeciesGmm NA NA NA NA   
## CountryGUI:SpeciesGmm NA NA NA NA   
## CountryGHA:SpeciesGmm NA NA NA NA   
## CountryBKF:SpeciesGmm NA NA NA NA   
## CountryZAM:SpeciesGmsm NA NA NA NA   
## CountrySAF:SpeciesGmsm NA NA NA NA   
## CountryUGA:SpeciesGmsm NA NA NA NA   
## CountryURT:SpeciesGmsm NA NA NA NA   
## CountrySWA:SpeciesGmsm NA NA NA NA   
## CountrySEN:SpeciesGmsm NA NA NA NA   
## CountryZAI:SpeciesGmsm NA NA NA NA   
## CountryMOZ:SpeciesGmsm NA NA NA NA   
## CountryMLI:SpeciesGmsm NA NA NA NA   
## CountryKEN:SpeciesGmsm NA NA NA NA   
## CountryETH:SpeciesGmsm NA NA NA NA   
## CountryGUI:SpeciesGmsm NA NA NA NA   
## CountryGHA:SpeciesGmsm NA NA NA NA   
## CountryBKF:SpeciesGmsm NA NA NA NA   
## CountryZAM:SpeciesGp NA NA NA NA   
## CountrySAF:SpeciesGp NA NA NA NA   
## CountryUGA:SpeciesGp NA NA NA NA   
## CountryURT:SpeciesGp NA NA NA NA   
## CountrySWA:SpeciesGp NA NA NA NA   
## CountrySEN:SpeciesGp NA NA NA NA   
## CountryZAI:SpeciesGp NA NA NA NA   
## CountryMOZ:SpeciesGp NA NA NA NA   
## CountryMLI:SpeciesGp NA NA NA NA   
## CountryKEN:SpeciesGp NA NA NA NA   
## CountryETH:SpeciesGp NA NA NA NA   
## CountryGUI:SpeciesGp NA NA NA NA   
## CountryGHA:SpeciesGp NA NA NA NA   
## CountryBKF:SpeciesGp NA NA NA NA   
## CountryZAM:SpeciesGpg NA NA NA NA   
## CountrySAF:SpeciesGpg NA NA NA NA   
## CountryUGA:SpeciesGpg NA NA NA NA   
## CountryURT:SpeciesGpg NA NA NA NA   
## CountrySWA:SpeciesGpg NA NA NA NA   
## CountrySEN:SpeciesGpg NA NA NA NA   
## CountryZAI:SpeciesGpg NA NA NA NA   
## CountryMOZ:SpeciesGpg NA NA NA NA   
## CountryMLI:SpeciesGpg NA NA NA NA   
## CountryKEN:SpeciesGpg NA NA NA NA   
## CountryETH:SpeciesGpg NA NA NA NA   
## CountryGUI:SpeciesGpg NA NA NA NA   
## CountryGHA:SpeciesGpg NA NA NA NA   
## CountryBKF:SpeciesGpg NA NA NA NA   
## CountryZAM:SpeciesGpp NA NA NA NA   
## CountrySAF:SpeciesGpp NA NA NA NA   
## CountryUGA:SpeciesGpp NA NA NA NA   
## CountryURT:SpeciesGpp NA NA NA NA   
## CountrySWA:SpeciesGpp NA NA NA NA   
## CountrySEN:SpeciesGpp NA NA NA NA   
## CountryZAI:SpeciesGpp NA NA NA NA   
## CountryMOZ:SpeciesGpp NA NA NA NA   
## CountryMLI:SpeciesGpp NA NA NA NA   
## CountryKEN:SpeciesGpp NA NA NA NA   
## CountryETH:SpeciesGpp NA NA NA NA   
## CountryGUI:SpeciesGpp NA NA NA NA   
## CountryGHA:SpeciesGpp NA NA NA NA   
## CountryBKF:SpeciesGpp NA NA NA NA   
## CountryZAM:SpeciesGt NA NA NA NA   
## CountrySAF:SpeciesGt NA NA NA NA   
## CountryUGA:SpeciesGt NA NA NA NA   
## CountryURT:SpeciesGt NA NA NA NA   
## CountrySWA:SpeciesGt NA NA NA NA   
## CountrySEN:SpeciesGt NA NA NA NA   
## CountryZAI:SpeciesGt NA NA NA NA   
## CountryMOZ:SpeciesGt NA NA NA NA   
## CountryMLI:SpeciesGt NA NA NA NA   
## CountryKEN:SpeciesGt NA NA NA NA   
## CountryETH:SpeciesGt NA NA NA NA   
## CountryGUI:SpeciesGt NA NA NA NA   
## CountryGHA:SpeciesGt NA NA NA NA   
## CountryBKF:SpeciesGt NA NA NA NA   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 186.9811)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 24308 on 130 degrees of freedom  
## AIC: 1284.3  
##   
## Number of Fisher Scoring iterations: 2

Anova(model3)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 88.292 12 1.056e-13 \*\*\*  
## Species 49.906 7 1.507e-08 \*\*\*  
## Country:Species 15.979 4 0.003048 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 108.02 14 < 2.2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Species 69.601 9 1.824e-11 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.5177 2.4578 0.211 0.8335   
## CountryZIM 11.7793 5.6584 2.082 0.0392 \*   
## CountryZAM 1.5323 16.3035 0.094 0.9253   
## CountrySAF 0.6386 6.2058 0.103 0.9182   
## CountryUGA 56.7443 7.6154 7.451 8.47e-12 \*\*\*  
## CountryURT 40.2907 7.0239 5.736 5.68e-08 \*\*\*  
## CountrySWA -0.5177 16.3035 -0.032 0.9747   
## CountrySEN -0.5177 4.8331 -0.107 0.9149   
## CountryZAI 10.9123 16.3035 0.669 0.5044   
## CountryMOZ 6.4823 11.6586 0.556 0.5791   
## CountryMLI -0.5177 4.5246 -0.114 0.9091   
## CountryKEN 23.3982 5.2619 4.447 1.75e-05 \*\*\*  
## CountryETH 19.9623 16.3035 1.224 0.2228   
## CountryGUI 5.8650 4.8331 1.214 0.2270   
## CountryGHA -0.5177 4.5246 -0.114 0.9091   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.073e-14 3.799e+00 0.000 1.000000   
## CountryBKF 5.177e-01 4.525e+00 0.114 0.909074   
## CountryZIM 1.230e+01 6.357e+00 1.934 0.055055 .   
## CountryZAM 2.050e+00 1.656e+01 0.124 0.901649   
## CountrySAF 1.156e+00 6.848e+00 0.169 0.866170   
## CountryUGA 5.726e+01 8.148e+00 7.028 8.24e-11 \*\*\*  
## CountryURT 4.081e+01 7.598e+00 5.371 3.15e-07 \*\*\*  
## CountrySWA 4.437e-14 1.656e+01 0.000 1.000000   
## CountrySEN 6.333e-14 5.635e+00 0.000 1.000000   
## CountryZAI 1.143e+01 1.656e+01 0.690 0.491162   
## CountryMOZ 7.000e+00 1.201e+01 0.583 0.561026   
## CountryMLI 2.074e-14 5.372e+00 0.000 1.000000   
## CountryKEN 2.392e+01 6.007e+00 3.982 0.000109 \*\*\*  
## CountryETH 2.048e+01 1.656e+01 1.237 0.218217   
## CountryGUI 6.383e+00 5.635e+00 1.133 0.259238   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.3827 4.1614 1.534 0.12733   
## CountryGHA -6.3827 5.6346 -1.133 0.25924   
## CountryBKF -5.8650 4.8331 -1.214 0.22696   
## CountryZIM 5.9143 6.5798 0.899 0.37026   
## CountryZAM -4.3327 16.6458 -0.260 0.79502   
## CountrySAF -5.2264 7.0561 -0.741 0.46011   
## CountryUGA 50.8793 8.3229 6.113 9.05e-09 \*\*\*  
## CountryURT 34.4257 7.7853 4.422 1.94e-05 \*\*\*  
## CountrySWA -6.3827 16.6458 -0.383 0.70197   
## CountrySEN -6.3827 5.8852 -1.085 0.27998   
## CountryZAI 5.0473 16.6458 0.303 0.76217   
## CountryMOZ 0.6173 12.1326 0.051 0.95949   
## CountryMLI -6.3827 5.6346 -1.133 0.25924   
## CountryKEN 17.5332 6.2422 2.809 0.00568 \*\*   
## CountryETH 14.0973 16.6458 0.847 0.39848   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 20.480 16.117 1.271 0.206   
## CountryGUI -14.097 16.646 -0.847 0.398   
## CountryGHA -20.480 16.559 -1.237 0.218   
## CountryBKF -19.962 16.304 -1.224 0.223   
## CountryZIM -8.183 16.904 -0.484 0.629   
## CountryZAM -18.430 22.793 -0.809 0.420   
## CountrySAF -19.324 17.095 -1.130 0.260   
## CountryUGA 36.782 17.656 2.083 0.039 \*  
## CountryURT 20.328 17.409 1.168 0.245   
## CountrySWA -20.480 22.793 -0.899 0.370   
## CountrySEN -20.480 16.646 -1.230 0.221   
## CountryZAI -9.050 22.793 -0.397 0.692   
## CountryMOZ -13.480 19.739 -0.683 0.496   
## CountryMLI -20.480 16.559 -1.237 0.218   
## CountryKEN 3.436 16.775 0.205 0.838   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 23.916 4.653 5.140 8.99e-07 \*\*\*  
## CountryETH -3.436 16.775 -0.205 0.838012   
## CountryGUI -17.533 6.242 -2.809 0.005678 \*\*   
## CountryGHA -23.916 6.007 -3.982 0.000109 \*\*\*  
## CountryBKF -23.398 5.262 -4.447 1.75e-05 \*\*\*  
## CountryZIM -11.619 6.901 -1.684 0.094462 .   
## CountryZAM -21.866 16.775 -1.303 0.194544   
## CountrySAF -22.760 7.356 -3.094 0.002383 \*\*   
## CountryUGA 33.346 8.579 3.887 0.000156 \*\*\*  
## CountryURT 16.893 8.059 2.096 0.037850 \*   
## CountrySWA -23.916 16.775 -1.426 0.156178   
## CountrySEN -23.916 6.242 -3.831 0.000191 \*\*\*  
## CountryZAI -12.486 16.775 -0.744 0.457935   
## CountryMOZ -16.916 12.310 -1.374 0.171564   
## CountryMLI -23.916 6.007 -3.982 0.000109 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.593e-14 3.799e+00 0.000 1.000000   
## CountryKEN 2.392e+01 6.007e+00 3.982 0.000109 \*\*\*  
## CountryETH 2.048e+01 1.656e+01 1.237 0.218217   
## CountryGUI 6.383e+00 5.635e+00 1.133 0.259238   
## CountryGHA 1.606e-14 5.372e+00 0.000 1.000000   
## CountryBKF 5.177e-01 4.525e+00 0.114 0.909074   
## CountryZIM 1.230e+01 6.357e+00 1.934 0.055055 .   
## CountryZAM 2.050e+00 1.656e+01 0.124 0.901649   
## CountrySAF 1.156e+00 6.848e+00 0.169 0.866170   
## CountryUGA 5.726e+01 8.148e+00 7.028 8.24e-11 \*\*\*  
## CountryURT 4.081e+01 7.598e+00 5.371 3.15e-07 \*\*\*  
## CountrySWA -1.030e-14 1.656e+01 0.000 1.000000   
## CountrySEN -5.405e-15 5.635e+00 0.000 1.000000   
## CountryZAI 1.143e+01 1.656e+01 0.690 0.491162   
## CountryMOZ 7.000e+00 1.201e+01 0.583 0.561026   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.0000 11.3966 0.614 0.540060   
## CountryMLI -7.0000 12.0130 -0.583 0.561026   
## CountryKEN 16.9158 12.3097 1.374 0.171564   
## CountryETH 13.4800 19.7395 0.683 0.495793   
## CountryGUI -0.6173 12.1326 -0.051 0.959491   
## CountryGHA -7.0000 12.0130 -0.583 0.561026   
## CountryBKF -6.4823 11.6586 -0.556 0.579084   
## CountryZIM 5.2970 12.4843 0.424 0.672000   
## CountryZAM -4.9500 19.7395 -0.251 0.802359   
## CountrySAF -5.8438 12.7418 -0.459 0.647206   
## CountryUGA 50.2620 13.4846 3.727 0.000279 \*\*\*  
## CountryURT 33.8083 13.1596 2.569 0.011236 \*   
## CountrySWA -7.0000 19.7395 -0.355 0.723404   
## CountrySEN -7.0000 12.1326 -0.577 0.564887   
## CountryZAI 4.4300 19.7395 0.224 0.822753   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 11.430 16.117 0.709 0.4794   
## CountryMOZ -4.430 19.739 -0.224 0.8228   
## CountryMLI -11.430 16.559 -0.690 0.4912   
## CountryKEN 12.486 16.775 0.744 0.4579   
## CountryETH 9.050 22.793 0.397 0.6919   
## CountryGUI -5.047 16.646 -0.303 0.7622   
## CountryGHA -11.430 16.559 -0.690 0.4912   
## CountryBKF -10.912 16.303 -0.669 0.5044   
## CountryZIM 0.867 16.904 0.051 0.9592   
## CountryZAM -9.380 22.793 -0.412 0.6813   
## CountrySAF -10.274 17.095 -0.601 0.5488   
## CountryUGA 45.832 17.655 2.596 0.0104 \*  
## CountryURT 29.378 17.409 1.688 0.0937 .  
## CountrySWA -11.430 22.793 -0.501 0.6168   
## CountrySEN -11.430 16.646 -0.687 0.4934   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -5.003e-14 4.161e+00 0.000 1.000000   
## CountryZAI 1.143e+01 1.665e+01 0.687 0.493424   
## CountryMOZ 7.000e+00 1.213e+01 0.577 0.564887   
## CountryMLI 5.839e-14 5.635e+00 0.000 1.000000   
## CountryKEN 2.392e+01 6.242e+00 3.831 0.000191 \*\*\*  
## CountryETH 2.048e+01 1.665e+01 1.230 0.220618   
## CountryGUI 6.383e+00 5.885e+00 1.085 0.279979   
## CountryGHA 3.874e-14 5.635e+00 0.000 1.000000   
## CountryBKF 5.177e-01 4.833e+00 0.107 0.914853   
## CountryZIM 1.230e+01 6.580e+00 1.869 0.063712 .   
## CountryZAM 2.050e+00 1.665e+01 0.123 0.902160   
## CountrySAF 1.156e+00 7.056e+00 0.164 0.870071   
## CountryUGA 5.726e+01 8.323e+00 6.880 1.80e-10 \*\*\*  
## CountryURT 4.081e+01 7.785e+00 5.242 5.69e-07 \*\*\*  
## CountrySWA 3.082e-13 1.665e+01 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.094e-13 1.612e+01 0.000 1.00000   
## CountrySEN -2.094e-13 1.665e+01 0.000 1.00000   
## CountryZAI 1.143e+01 2.279e+01 0.501 0.61683   
## CountryMOZ 7.000e+00 1.974e+01 0.355 0.72340   
## CountryMLI -2.721e-13 1.656e+01 0.000 1.00000   
## CountryKEN 2.392e+01 1.678e+01 1.426 0.15618   
## CountryETH 2.048e+01 2.279e+01 0.899 0.37044   
## CountryGUI 6.383e+00 1.665e+01 0.383 0.70197   
## CountryGHA -1.970e-13 1.656e+01 0.000 1.00000   
## CountryBKF 5.177e-01 1.630e+01 0.032 0.97471   
## CountryZIM 1.230e+01 1.690e+01 0.727 0.46815   
## CountryZAM 2.050e+00 2.279e+01 0.090 0.92846   
## CountrySAF 1.156e+00 1.709e+01 0.068 0.94617   
## CountryUGA 5.726e+01 1.766e+01 3.243 0.00148 \*\*  
## CountryURT 4.081e+01 1.741e+01 2.344 0.02047 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 40.808 6.580 6.202 5.82e-09 \*\*\*  
## CountrySWA -40.808 17.409 -2.344 0.020467 \*   
## CountrySEN -40.808 7.785 -5.242 5.69e-07 \*\*\*  
## CountryZAI -29.378 17.409 -1.688 0.093703 .   
## CountryMOZ -33.808 13.160 -2.569 0.011236 \*   
## CountryMLI -40.808 7.598 -5.371 3.15e-07 \*\*\*  
## CountryKEN -16.892 8.059 -2.096 0.037850 \*   
## CountryETH -20.328 17.409 -1.168 0.244890   
## CountryGUI -34.426 7.785 -4.422 1.94e-05 \*\*\*  
## CountryGHA -40.808 7.598 -5.371 3.15e-07 \*\*\*  
## CountryBKF -40.291 7.024 -5.736 5.68e-08 \*\*\*  
## CountryZIM -28.511 8.323 -3.426 0.000804 \*\*\*  
## CountryZAM -38.758 17.409 -2.226 0.027574 \*   
## CountrySAF -39.652 8.704 -4.555 1.12e-05 \*\*\*  
## CountryUGA 16.454 9.759 1.686 0.094022 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 57.262 7.208 7.944 5.61e-13 \*\*\*  
## CountryURT -16.454 9.759 -1.686 0.094022 .   
## CountrySWA -57.262 17.656 -3.243 0.001475 \*\*   
## CountrySEN -57.262 8.323 -6.880 1.80e-10 \*\*\*  
## CountryZAI -45.832 17.656 -2.596 0.010433 \*   
## CountryMOZ -50.262 13.485 -3.727 0.000279 \*\*\*  
## CountryMLI -57.262 8.148 -7.028 8.24e-11 \*\*\*  
## CountryKEN -33.346 8.579 -3.887 0.000156 \*\*\*  
## CountryETH -36.782 17.656 -2.083 0.039028 \*   
## CountryGUI -50.879 8.323 -6.113 9.05e-09 \*\*\*  
## CountryGHA -57.262 8.148 -7.028 8.24e-11 \*\*\*  
## CountryBKF -56.744 7.615 -7.451 8.47e-12 \*\*\*  
## CountryZIM -44.965 8.828 -5.094 1.11e-06 \*\*\*  
## CountryZAM -55.212 17.656 -3.127 0.002144 \*\*   
## CountrySAF -56.106 9.188 -6.106 9.37e-09 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.1562 5.6983 0.203 0.83950   
## CountryUGA 56.1057 9.1882 6.106 9.37e-09 \*\*\*  
## CountryURT 39.6521 8.7043 4.555 1.12e-05 \*\*\*  
## CountrySWA -1.1562 17.0949 -0.068 0.94617   
## CountrySEN -1.1563 7.0561 -0.164 0.87007   
## CountryZAI 10.2737 17.0949 0.601 0.54882   
## CountryMOZ 5.8438 12.7418 0.459 0.64721   
## CountryMLI -1.1562 6.8485 -0.169 0.86617   
## CountryKEN 22.7596 7.3565 3.094 0.00238 \*\*   
## CountryETH 19.3238 17.0949 1.130 0.26023   
## CountryGUI 5.2264 7.0561 0.741 0.46011   
## CountryGHA -1.1562 6.8485 -0.169 0.86617   
## CountryBKF -0.6386 6.2058 -0.103 0.91819   
## CountryZIM 11.1408 7.6451 1.457 0.14727   
## CountryZAM 0.8938 17.0949 0.052 0.95838   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.0500 16.1172 0.127 0.89897   
## CountrySAF -0.8937 17.0949 -0.052 0.95838   
## CountryUGA 55.2120 17.6555 3.127 0.00214 \*\*  
## CountryURT 38.7583 17.4086 2.226 0.02757 \*   
## CountrySWA -2.0500 22.7932 -0.090 0.92846   
## CountrySEN -2.0500 16.6458 -0.123 0.90216   
## CountryZAI 9.3800 22.7932 0.412 0.68131   
## CountryMOZ 4.9500 19.7395 0.251 0.80236   
## CountryMLI -2.0500 16.5588 -0.124 0.90165   
## CountryKEN 21.8658 16.7753 1.303 0.19454   
## CountryETH 18.4300 22.7932 0.809 0.42012   
## CountryGUI 4.3327 16.6458 0.260 0.79502   
## CountryGHA -2.0500 16.5588 -0.124 0.90165   
## CountryBKF -1.5323 16.3035 -0.094 0.92525   
## CountryZIM 10.2470 16.9039 0.606 0.54536   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_Sod) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -57.262 -0.518 0.000 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 12.297 5.097 2.413 0.017118 \*   
## CountryZAM -10.247 16.904 -0.606 0.545361   
## CountrySAF -11.141 7.645 -1.457 0.147271   
## CountryUGA 44.965 8.828 5.094 1.11e-06 \*\*\*  
## CountryURT 28.511 8.323 3.426 0.000804 \*\*\*  
## CountrySWA -12.297 16.904 -0.727 0.468146   
## CountrySEN -12.297 6.580 -1.869 0.063712 .   
## CountryZAI -0.867 16.904 -0.051 0.959167   
## CountryMOZ -5.297 12.484 -0.424 0.672000   
## CountryMLI -12.297 6.357 -1.934 0.055055 .   
## CountryKEN 11.619 6.901 1.684 0.094462 .   
## CountryETH 8.183 16.904 0.484 0.629073   
## CountryGUI -5.914 6.580 -0.899 0.370260   
## CountryGHA -12.297 6.357 -1.934 0.055055 .   
## CountryBKF -11.779 5.658 -2.082 0.039174 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 259.7641)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 36627 on 141 degrees of freedom  
## AIC: 1326.3  
##   
## Number of Fisher Scoring iterations: 2

## Statistics for table 3

# for trypanosome Tspp  
  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 14.970 10.945 1.368 0.17349   
## SpeciesGb 2.096 18.314 0.114 0.90904   
## SpeciesGff 2.747 21.890 0.125 0.90032   
## SpeciesGmed 28.225 19.731 1.430 0.15472   
## SpeciesGmm 9.161 15.955 0.574 0.56672   
## SpeciesGmsm 1.064 18.314 0.058 0.95375   
## SpeciesGp 21.049 13.082 1.609 0.10977   
## SpeciesGpg 8.596 11.591 0.742 0.45955   
## SpeciesGpp -12.110 34.611 -0.350 0.72692   
## SpeciesGt 38.052 12.699 2.997 0.00321 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 17.0660 14.6841 1.162 0.2470   
## SpeciesGa -2.0960 18.3143 -0.114 0.9090   
## SpeciesGff 0.6507 23.9790 0.027 0.9784   
## SpeciesGmed 26.1290 22.0261 1.186 0.2374   
## SpeciesGmm 7.0652 18.7186 0.377 0.7064   
## SpeciesGmsm -1.0320 20.7664 -0.050 0.9604   
## SpeciesGp 18.9526 16.3390 1.160 0.2480   
## SpeciesGpg 6.4995 15.1721 0.428 0.6690   
## SpeciesGpp -14.2060 35.9685 -0.395 0.6935   
## SpeciesGt 35.9559 16.0340 2.242 0.0264 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 17.7167 18.9571 0.935 0.3516   
## SpeciesGb -0.6507 23.9790 -0.027 0.9784   
## SpeciesGa -2.7467 21.8898 -0.125 0.9003   
## SpeciesGmed 25.4783 25.0779 1.016 0.3113   
## SpeciesGmm 6.4146 22.2292 0.289 0.7733   
## SpeciesGmsm -1.6827 23.9790 -0.070 0.9442   
## SpeciesGp 18.3019 20.2660 0.903 0.3680   
## SpeciesGpg 5.8489 19.3375 0.302 0.7627   
## SpeciesGpp -14.8567 37.9142 -0.392 0.6957   
## SpeciesGt 35.3053 20.0209 1.763 0.0799 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 43.195 16.417 2.631 0.00943 \*\*  
## SpeciesGff -25.478 25.078 -1.016 0.31132   
## SpeciesGb -26.129 22.026 -1.186 0.23744   
## SpeciesGa -28.225 19.731 -1.430 0.15472   
## SpeciesGmm -19.064 20.107 -0.948 0.34464   
## SpeciesGmsm -27.161 22.026 -1.233 0.21951   
## SpeciesGp -7.176 17.913 -0.401 0.68928   
## SpeciesGpg -19.629 16.855 -1.165 0.24608   
## SpeciesGpp -40.335 36.710 -1.099 0.27369   
## SpeciesGt 9.827 17.635 0.557 0.57822   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 24.1312 11.6088 2.079 0.0394 \*  
## SpeciesGmed 19.0637 20.1070 0.948 0.3446   
## SpeciesGff -6.4146 22.2292 -0.289 0.7733   
## SpeciesGb -7.0652 18.7186 -0.377 0.7064   
## SpeciesGa -9.1612 15.9548 -0.574 0.5667   
## SpeciesGmsm -8.0972 18.7186 -0.433 0.6660   
## SpeciesGp 11.8873 13.6420 0.871 0.3850   
## SpeciesGpg -0.5657 12.2202 -0.046 0.9631   
## SpeciesGpp -21.2713 34.8264 -0.611 0.5423   
## SpeciesGt 28.8907 13.2752 2.176 0.0311 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 16.034 14.684 1.092 0.2767   
## SpeciesGmm 8.097 18.719 0.433 0.6660   
## SpeciesGmed 27.161 22.026 1.233 0.2195   
## SpeciesGff 1.683 23.979 0.070 0.9442   
## SpeciesGb 1.032 20.766 0.050 0.9604   
## SpeciesGa -1.064 18.314 -0.058 0.9538   
## SpeciesGp 19.985 16.339 1.223 0.2233   
## SpeciesGpg 7.532 15.172 0.496 0.6204   
## SpeciesGpp -13.174 35.969 -0.366 0.7147   
## SpeciesGt 36.988 16.034 2.307 0.0225 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 36.019 7.165 5.027 1.44e-06 \*\*\*  
## SpeciesGmsm -19.985 16.339 -1.223 0.2233   
## SpeciesGmm -11.887 13.642 -0.871 0.3850   
## SpeciesGmed 7.176 17.913 0.401 0.6893   
## SpeciesGff -18.302 20.266 -0.903 0.3680   
## SpeciesGb -18.953 16.339 -1.160 0.2480   
## SpeciesGa -21.049 13.082 -1.609 0.1098   
## SpeciesGpg -12.453 8.118 -1.534 0.1272   
## SpeciesGpp -33.159 33.607 -0.987 0.3254   
## SpeciesGt 17.003 9.634 1.765 0.0797 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 23.5655 3.8169 6.174 6.26e-09 \*\*\*  
## SpeciesGp 12.4530 8.1184 1.534 0.127210   
## SpeciesGmsm -7.5315 15.1721 -0.496 0.620353   
## SpeciesGmm 0.5657 12.2202 0.046 0.963140   
## SpeciesGmed 19.6295 16.8552 1.165 0.246083   
## SpeciesGff -5.8489 19.3375 -0.302 0.762730   
## SpeciesGb -6.4995 15.1721 -0.428 0.669000   
## SpeciesGa -8.5955 11.5914 -0.742 0.459553   
## SpeciesGpp -20.7055 33.0557 -0.626 0.532042   
## SpeciesGt 29.4564 7.4857 3.935 0.000128 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.86 32.84 0.087 0.931  
## SpeciesGpg 20.71 33.06 0.626 0.532  
## SpeciesGp 33.16 33.61 0.987 0.325  
## SpeciesGmsm 13.17 35.97 0.366 0.715  
## SpeciesGmm 21.27 34.83 0.611 0.542  
## SpeciesGmed 40.34 36.71 1.099 0.274  
## SpeciesGff 14.86 37.91 0.392 0.696  
## SpeciesGb 14.21 35.97 0.395 0.693  
## SpeciesGa 12.11 34.61 0.350 0.727  
## SpeciesGt 50.16 33.46 1.499 0.136  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_Tspp) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -53.02 -23.57 -14.97 21.89 76.43   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 53.022 6.439 8.234 9.33e-14 \*\*\*  
## SpeciesGpp -50.162 33.460 -1.499 0.135992   
## SpeciesGpg -29.456 7.486 -3.935 0.000128 \*\*\*  
## SpeciesGp -17.003 9.634 -1.765 0.079651 .   
## SpeciesGmsm -36.988 16.034 -2.307 0.022470 \*   
## SpeciesGmm -28.891 13.275 -2.176 0.031141 \*   
## SpeciesGmed -9.827 17.635 -0.557 0.578217   
## SpeciesGff -35.305 20.021 -1.763 0.079922 .   
## SpeciesGb -35.956 16.034 -2.242 0.026437 \*   
## SpeciesGa -38.052 12.699 -2.997 0.003210 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1078.113)  
##   
## Null deviance: 180975 on 155 degrees of freedom  
## Residual deviance: 157405 on 146 degrees of freedom  
## AIC: 1543.7  
##   
## Number of Fisher Scoring iterations: 2

#--------------------------------------------------------------  
# for Sodalis  
  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.1633 5.7738 0.548 0.58461   
## SpeciesGt -3.1633 6.6990 -0.472 0.63748   
## SpeciesGpp 8.2667 18.2583 0.453 0.65139   
## SpeciesGpg -1.8440 6.1148 -0.302 0.76341   
## SpeciesGp 27.9524 6.9010 4.050 8.27e-05 \*\*\*  
## SpeciesGmsm -2.8253 9.6614 -0.292 0.77037   
## SpeciesGmm 27.2617 8.4167 3.239 0.00149 \*\*   
## SpeciesGmed 1.5067 10.4088 0.145 0.88511   
## SpeciesGff 11.3300 11.5476 0.981 0.32814   
## SpeciesGb 0.4607 9.6614 0.048 0.96204   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Species 69.601 9 1.824e-11 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.6240 7.7463 0.468 0.64060   
## SpeciesGa -0.4607 9.6614 -0.048 0.96204   
## SpeciesGt -3.6240 8.4584 -0.428 0.66896   
## SpeciesGpp 7.8060 18.9746 0.411 0.68139   
## SpeciesGpg -2.3047 8.0038 -0.288 0.77379   
## SpeciesGp 27.4917 8.6193 3.190 0.00174 \*\*  
## SpeciesGmsm -3.2860 10.9550 -0.300 0.76464   
## SpeciesGmm 26.8010 9.8747 2.714 0.00745 \*\*  
## SpeciesGmed 1.0460 11.6195 0.090 0.92839   
## SpeciesGff 10.8693 12.6497 0.859 0.39161   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 14.493 10.000 1.449 0.149  
## SpeciesGb -10.869 12.650 -0.859 0.392  
## SpeciesGa -11.330 11.548 -0.981 0.328  
## SpeciesGt -14.493 10.562 -1.372 0.172  
## SpeciesGpp -3.063 20.001 -0.153 0.878  
## SpeciesGpg -13.174 10.201 -1.291 0.199  
## SpeciesGp 16.622 10.691 1.555 0.122  
## SpeciesGmsm -14.155 12.650 -1.119 0.265  
## SpeciesGmm 15.932 11.727 1.359 0.176  
## SpeciesGmed -9.823 13.229 -0.743 0.459  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.670 8.661 0.539 0.59056   
## SpeciesGff 9.823 13.229 0.743 0.45895   
## SpeciesGb -1.046 11.619 -0.090 0.92839   
## SpeciesGa -1.507 10.409 -0.145 0.88511   
## SpeciesGt -4.670 9.303 -0.502 0.61643   
## SpeciesGpp 6.760 19.366 0.349 0.72754   
## SpeciesGpg -3.351 8.892 -0.377 0.70684   
## SpeciesGp 26.446 9.450 2.799 0.00583 \*\*  
## SpeciesGmsm -4.332 11.619 -0.373 0.70982   
## SpeciesGmm 25.755 10.607 2.428 0.01640 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 30.4250 6.1240 4.968 1.87e-06 \*\*\*  
## SpeciesGmed -25.7550 10.6071 -2.428 0.01640 \*   
## SpeciesGff -15.9317 11.7266 -1.359 0.17637   
## SpeciesGb -26.8010 9.8747 -2.714 0.00745 \*\*   
## SpeciesGa -27.2617 8.4167 -3.239 0.00149 \*\*   
## SpeciesGt -30.4250 7.0031 -4.345 2.60e-05 \*\*\*  
## SpeciesGpp -18.9950 18.3720 -1.034 0.30289   
## SpeciesGpg -29.1057 6.4465 -4.515 1.30e-05 \*\*\*  
## SpeciesGp 0.6907 7.1966 0.096 0.92367   
## SpeciesGmsm -30.0870 9.8747 -3.047 0.00274 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.3380 7.7463 0.044 0.965256   
## SpeciesGmm 30.0870 9.8747 3.047 0.002745 \*\*   
## SpeciesGmed 4.3320 11.6195 0.373 0.709822   
## SpeciesGff 14.1553 12.6497 1.119 0.264967   
## SpeciesGb 3.2860 10.9550 0.300 0.764638   
## SpeciesGa 2.8253 9.6614 0.292 0.770368   
## SpeciesGt -0.3380 8.4584 -0.040 0.968180   
## SpeciesGpp 11.0920 18.9746 0.585 0.559738   
## SpeciesGpg 0.9813 8.0038 0.123 0.902586   
## SpeciesGp 30.7777 8.6193 3.571 0.000482 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 31.1157 3.7798 8.232 9.43e-14 \*\*\*  
## SpeciesGmsm -30.7777 8.6193 -3.571 0.000482 \*\*\*  
## SpeciesGmm -0.6907 7.1966 -0.096 0.923669   
## SpeciesGmed -26.4457 9.4496 -2.799 0.005826 \*\*   
## SpeciesGff -16.6224 10.6910 -1.555 0.122157   
## SpeciesGb -27.4917 8.6193 -3.190 0.001744 \*\*   
## SpeciesGa -27.9524 6.9010 -4.050 8.27e-05 \*\*\*  
## SpeciesGt -31.1157 5.0820 -6.123 8.08e-09 \*\*\*  
## SpeciesGpp -19.6857 17.7289 -1.110 0.268664   
## SpeciesGpg -29.7964 4.2827 -6.957 1.08e-10 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.3193 2.0136 0.655 0.513   
## SpeciesGp 29.7964 4.2827 6.957 1.08e-10 \*\*\*  
## SpeciesGmsm -0.9813 8.0038 -0.123 0.903   
## SpeciesGmm 29.1057 6.4465 4.515 1.30e-05 \*\*\*  
## SpeciesGmed 3.3507 8.8917 0.377 0.707   
## SpeciesGff 13.1740 10.2012 1.291 0.199   
## SpeciesGb 2.3047 8.0038 0.288 0.774   
## SpeciesGa 1.8440 6.1148 0.302 0.763   
## SpeciesGt -1.3193 3.9489 -0.334 0.739   
## SpeciesGpp 10.1107 17.4380 0.580 0.563   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 11.430 17.321 0.660 0.510  
## SpeciesGpg -10.111 17.438 -0.580 0.563  
## SpeciesGp 19.686 17.729 1.110 0.269  
## SpeciesGmsm -11.092 18.975 -0.585 0.560  
## SpeciesGmm 18.995 18.372 1.034 0.303  
## SpeciesGmed -6.760 19.366 -0.349 0.728  
## SpeciesGff 3.063 20.001 0.153 0.878  
## SpeciesGb -7.806 18.975 -0.411 0.681  
## SpeciesGa -8.267 18.258 -0.453 0.651  
## SpeciesGt -11.430 17.651 -0.648 0.518  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_Sod) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -31.116 -1.319 -1.319 0.000 94.421   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.508e-14 3.397e+00 0.000 1.000   
## SpeciesGpp 1.143e+01 1.765e+01 0.648 0.518   
## SpeciesGpg 1.319e+00 3.949e+00 0.334 0.739   
## SpeciesGp 3.112e+01 5.082e+00 6.123 8.08e-09 \*\*\*  
## SpeciesGmsm 3.380e-01 8.458e+00 0.040 0.968   
## SpeciesGmm 3.042e+01 7.003e+00 4.345 2.60e-05 \*\*\*  
## SpeciesGmed 4.670e+00 9.303e+00 0.502 0.616   
## SpeciesGff 1.449e+01 1.056e+01 1.372 0.172   
## SpeciesGb 3.624e+00 8.458e+00 0.428 0.669   
## SpeciesGa 3.163e+00 6.699e+00 0.472 0.637   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.0283)  
##   
## Null deviance: 64686 on 155 degrees of freedom  
## Residual deviance: 43804 on 146 degrees of freedom  
## AIC: 1344.2  
##   
## Number of Fisher Scoring iterations: 2

## Statistics for table 4

# species with significant differences between countries  
  
data\_ga <- subset(data, Species=="Ga")  
data\_ga

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp  
## 27 SAF False Bay Park Ga NI 27 0.00 2.60  
## 41 SAF SAFint Lucia Ga NI 41 0.00 38.60  
## 46 SAF Lower Mkhuze Ga NI 46 0.00 43.40  
## 53 MOZ Reserva Especial de Maputo Ga NI 53 0.00 10.00  
## 59 SAF North eastern KwaZulu-Natal Ga NI 59 5.13 5.13  
## 75 SWA Mlawula Nature Reserve Ga NI 75 0.00 0.00  
## 76 URT Uguja island Ga NI 76 6.67 10.00  
## 132 URT Zanzibar Ga NI 132 16.67 0.00  
## 141 URT Jozani Ga NI 141 0.00 25.00  
## Prev\_Tc Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 27 2.60 0.00 0.00 0.00 0.00 0 0.00 0  
## 41 10.53 0.00 10.53 15.79 0.00 0 1.75 0  
## 46 9.43 1.89 3.77 24.53 1.89 0 1.89 0  
## 53 6.00 0.00 0.00 4.00 0.00 0 0.00 0  
## 59 2.56 0.00 0.00 2.56 0.00 0 0.00 0  
## 75 0.00 0.00 0.00 0.00 0.00 0 0.00 0  
## 76 0.00 6.67 3.33 0.00 0.00 0 0.00 0  
## 132 0.00 0.00 0.00 0.00 0.00 0 0.00 0  
## 141 0.00 0.00 25.00 0.00 0.00 0 0.00 0  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 27 0 0 0  
## 41 0 0 0  
## 46 0 0 0  
## 53 0 0 0  
## 59 0 0 0  
## 75 0 0 0  
## 76 0 0 0  
## 132 0 0 0  
## 141 0 0 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -19.832 16.168 20.968 0.000 -17.302 0.000 -1.667 -11.667   
## 141   
## 13.333   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 22.433 9.248 2.426 0.0597 .  
## CountryURT -10.766 14.126 -0.762 0.4804   
## CountrySWA -22.433 20.678 -1.085 0.3275   
## CountryMOZ -12.432 20.678 -0.601 0.5739   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 342.0791)  
##   
## Null deviance: 2214.7 on 8 degrees of freedom  
## Residual deviance: 1710.4 on 5 degrees of freedom  
## AIC: 82.766  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 1.4742 3 0.6882

model2<-glm((Prev\_Sod) ~ Country,data=data\_ga, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -1.282 -1.282 -1.282 0.000 3.848 0.000 -1.110 8.890 -7.780   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.282 2.833 0.453 0.670  
## CountryURT 6.498 4.328 1.501 0.194  
## CountrySWA -1.282 6.335 -0.202 0.848  
## CountryMOZ -1.282 6.335 -0.202 0.848  
##   
## (Dispersion parameter for gaussian family taken to be 32.10606)  
##   
## Null deviance: 258.63 on 8 degrees of freedom  
## Residual deviance: 160.53 on 5 degrees of freedom  
## AIC: 61.472  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)  
## Country 3.0556 3 0.3831

#-----------------------------------------------  
  
data\_gb <- subset(data, Species=="Gb")  
data\_gb

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp  
## 7 SAF Phinda Gb NI 7 4.12 0.00  
## 50 SAF Hluhluwe Gb NI 50 0.00 32.00  
## 51 SAF North eastern KwaZulu-Natal Gb NI 51 0.00 4.00  
## 52 MOZ Reserva Especial de Maputo Gb NI 52 14.00 6.00  
## 74 SAF SAFint Lucia Gb NI 74 0.00 43.33  
## Prev\_Tc Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 7 0 0.00 0.00 0.00 0 0 0 0  
## 50 12 2.00 14.00 4.00 0 0 0 0  
## 51 2 0.00 0.00 2.00 0 0 0 0  
## 52 0 2.00 0.00 2.00 0 0 0 0  
## 74 0 3.33 3.33 36.67 0 0 0 0  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 7 0 0 0  
## 50 0 0 0  
## 51 0 0 0  
## 52 2 0 0  
## 74 0 0 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gb, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gb)  
##   
## Deviance Residuals:   
## 7 50 51 52 74   
## -19.83 12.17 -15.83 0.00 23.50   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 19.83 10.58 1.874 0.158  
## CountryMOZ -13.83 23.67 -0.584 0.600  
##   
## (Dispersion parameter for gaussian family taken to be 448.0589)  
##   
## Null deviance: 1497.2 on 4 degrees of freedom  
## Residual deviance: 1344.2 on 3 degrees of freedom  
## AIC: 48.16  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 0.34163 1 0.5589

model2<-glm((Prev\_Sod) ~ Country,data=data\_gb, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gb)  
##   
## Deviance Residuals:   
## 7 50 51 52 74   
## 3.09 -1.03 -1.03 0.00 -1.03   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.030 1.030 1.000 0.3910   
## CountryMOZ 12.970 2.303 5.631 0.0111 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 4.2436)  
##   
## Null deviance: 147.308 on 4 degrees of freedom  
## Residual deviance: 12.731 on 3 degrees of freedom  
## AIC: 24.862  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 31.713 1 1.787e-08 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------------------  
data\_gff <- subset(data, Species=="Gff")  
data\_gff

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 16 UGA Buvuma island Gff NI 16 4.26 10.64 3.19 2.13  
## 49 KEN Ikapolok Gff NI 49 39.22 37.25 1.96 9.80  
## 61 KEN Obekai Gff NI 61 0.00 5.26 2.63 2.63  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 16 1.06 3.19 0.00 0.00 1.06 0 0  
## 49 0.00 19.61 3.92 1.96 0.00 0 0  
## 61 0.00 0.00 0.00 0.00 0.00 0 0  
## Prev\_TzTsg Prev\_TcTvTz  
## 16 0 0  
## 49 0 0  
## 61 0 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.00 15.99 -15.99   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 10.64 22.62 0.470 0.720  
## CountryKEN 10.61 27.70 0.383 0.767  
##   
## (Dispersion parameter for gaussian family taken to be 511.68)  
##   
## Null deviance: 586.80 on 2 degrees of freedom  
## Residual deviance: 511.68 on 1 degrees of freedom  
## AIC: 29.931  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 0.14681 1 0.7016

model2<-glm((Prev\_Sod) ~ Country,data=data\_gff, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.00 19.61 -19.61   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 4.26 27.73 0.154 0.903  
## CountryKEN 15.35 33.97 0.452 0.730  
##   
## (Dispersion parameter for gaussian family taken to be 769.1042)  
##   
## Null deviance: 926.19 on 2 degrees of freedom  
## Residual deviance: 769.10 on 1 degrees of freedom  
## AIC: 31.153  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)  
## Country 0.20424 1 0.6513

#-------------------------------------------------------------------------  
data\_gmm <- subset(data, Species=="Gmm")  
data\_gmm

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 21 KEN Kari Gmm NI 21 63.53 2.35 2.35 0.00  
## 22 URT MaSAFng-URTga Gmm NI 22 76.54 53.09 18.52 1.23  
## 26 ZIM Makuti Gmm NI 26 26.92 91.03 11.54 0.00  
## 93 ZIM Kemukura Gmm NI 93 22.22 5.56 0.00 5.56  
## 100 ZIM Rukomeshi Gmm NI 100 20.00 0.00 0.00 0.00  
## 105 ZIM Mukondore Gmm NI 105 23.08 7.69 7.69 0.00  
## 115 ZIM M. chiuyi Gmm NI 115 11.11 0.00 0.00 0.00  
## 131 ZIM Mushumb Gmm NI 131 0.00 33.33 16.67 0.00  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 21 0.00 0.00 0 0 0.00 0 0.00  
## 22 1.23 18.52 0 0 6.17 0 6.17  
## 26 2.56 69.23 0 0 7.69 0 0.00  
## 93 0.00 0.00 0 0 0.00 0 0.00  
## 100 0.00 0.00 0 0 0.00 0 0.00  
## 105 0.00 0.00 0 0 0.00 0 0.00  
## 115 0.00 0.00 0 0 0.00 0 0.00  
## 131 0.00 16.67 0 0 0.00 0 0.00  
## Prev\_TzTsg Prev\_TcTvTz  
## 21 0.00 0  
## 22 1.23 0  
## 26 0.00 0  
## 93 0.00 0  
## 100 0.00 0  
## 105 0.00 0  
## 115 0.00 0  
## 131 0.00 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.00 0.00 68.09 -17.38 -22.93 -15.24 -22.93 10.39   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 22.93 14.53 1.579 0.175  
## CountryURT 30.15 38.44 0.785 0.468  
## CountryKEN -20.59 38.44 -0.536 0.615  
##   
## (Dispersion parameter for gaussian family taken to be 1266.263)  
##   
## Null deviance: 7652.9 on 7 degrees of freedom  
## Residual deviance: 6331.3 on 5 degrees of freedom  
## AIC: 84.094  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 1.0437 2 0.5934

model2<-glm((Prev\_Sod) ~ Country,data=data\_gmm, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 9.698 4.998 2.778 5.858 -6.112 -17.222   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 17.222 4.062 4.240 0.00817 \*\*  
## CountryURT 59.318 10.747 5.519 0.00267 \*\*  
## CountryKEN 46.308 10.747 4.309 0.00765 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 99.0037)  
##   
## Null deviance: 4763.52 on 7 degrees of freedom  
## Residual deviance: 495.02 on 5 degrees of freedom  
## AIC: 63.704  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 43.115 2 4.343e-10 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model2<-glm((Prev\_Sod) ~ Country,data=data\_gmm, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 9.698 4.998 2.778 5.858 -6.112 -17.222   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 76.54 9.95 7.692 0.000592 \*\*\*  
## CountryZIM -59.32 10.75 -5.519 0.002673 \*\*   
## CountryKEN -13.01 14.07 -0.925 0.397621   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 99.0037)  
##   
## Null deviance: 4763.52 on 7 degrees of freedom  
## Residual deviance: 495.02 on 5 degrees of freedom  
## AIC: 63.704  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 43.115 2 4.343e-10 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model2<-glm((Prev\_Sod) ~ Country,data=data\_gmm, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 9.698 4.998 2.778 5.858 -6.112 -17.222   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 76.54 9.95 7.692 0.000592 \*\*\*  
## CountryZIM -59.32 10.75 -5.519 0.002673 \*\*   
## CountryKEN -13.01 14.07 -0.925 0.397621   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 99.0037)  
##   
## Null deviance: 4763.52 on 7 degrees of freedom  
## Residual deviance: 495.02 on 5 degrees of freedom  
## AIC: 63.704  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 43.115 2 4.343e-10 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model2<-glm((Prev\_Sod) ~ Country,data=data\_gmm, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 9.698 4.998 2.778 5.858 -6.112 -17.222   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 17.222 4.062 4.240 0.00817 \*\*  
## CountryURT 59.318 10.747 5.519 0.00267 \*\*  
## CountryKEN 46.308 10.747 4.309 0.00765 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 99.0037)  
##   
## Null deviance: 4763.52 on 7 degrees of freedom  
## Residual deviance: 495.02 on 5 degrees of freedom  
## AIC: 63.704  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 43.115 2 4.343e-10 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#----------------------------------------------------------------  
#Gp  
  
data\_gp <- subset(data, Species=="Gp")  
data\_gp

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc  
## 1 ETH Arba minch, nech SAFr Gp NI 1 20.48 20.04 6.10  
## 5 KEN Katotoi Gp NI 5 42.56 88.72 21.54  
## 6 KEN Mwea Gp NI 6 3.08 19.49 7.18  
## 8 ZAM Mfuwe Gp NI 8 2.05 45.21 1.37  
## 9 URT URTzania Gp NI 9 78.77 19.86 6.16  
## 17 KEN Kari Gp NI 17 89.36 2.13 1.06  
## 19 KEN Koibos Gp NI 19 0.00 71.59 15.91  
## 20 KEN Meru nat. parc Gp NI 20 22.99 70.11 29.89  
## 23 KEN Ruma nat. parc Gp NI 23 26.25 17.50 10.00  
## 31 URT MaSAFng-URTga Gp NI 31 66.20 73.24 33.80  
## 38 KEN Emsos Gp NI 38 0.00 93.33 15.00  
## 42 UGA Budaka Gp NI 42 94.55 7.27 1.82  
## 60 ZIM Makuti Gp NI 60 15.79 86.84 7.89  
## 79 UGA Omugo Gp NI 79 100.00 0.00 0.00  
## 81 ZIM Mushumb Gp NI 81 3.85 19.23 3.85  
## 85 UGA Lira Gp NI 85 0.00 16.00 8.00  
## 90 KEN Kiria Gp NI 90 0.00 80.00 55.00  
## 101 KEN Mwea nat. parc Gp NI 101 0.00 13.33 13.33  
## 118 UGA Moyo Gp NI 118 87.50 12.50 0.00  
## 139 ZIM Rukomeshi Gp NI 139 0.00 0.00 0.00  
## 140 ZIM Gokwe Gp NI 140 0.00 0.00 0.00  
## Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 1 0.65 1.09 10.46 0.00 0.00 0.65 0.00  
## 5 15.38 0.51 26.15 6.67 1.54 15.90 1.03  
## 6 0.51 1.03 7.69 1.03 0.51 0.51 0.00  
## 8 0.68 0.68 34.93 0.00 0.00 7.53 0.00  
## 9 2.74 0.68 8.22 0.00 0.00 0.68 0.00  
## 17 0.00 1.06 0.00 0.00 0.00 0.00 0.00  
## 19 9.09 0.00 28.41 0.00 0.00 15.91 0.00  
## 20 4.60 0.00 25.29 0.00 0.00 10.34 0.00  
## 23 2.50 2.50 0.00 1.25 0.00 0.00 0.00  
## 31 0.00 0.00 14.08 0.00 1.41 21.13 1.41  
## 38 8.33 0.00 58.33 1.67 0.00 10.00 0.00  
## 42 0.00 0.00 5.45 0.00 0.00 0.00 0.00  
## 60 0.00 0.00 73.68 0.00 0.00 5.26 0.00  
## 79 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 81 0.00 7.69 3.85 0.00 0.00 3.85 0.00  
## 85 0.00 4.00 4.00 0.00 0.00 0.00 0.00  
## 90 5.00 0.00 10.00 10.00 0.00 0.00 0.00  
## 101 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 118 0.00 0.00 12.50 0.00 0.00 0.00 0.00  
## 139 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 140 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 1 0.44 0.65 0  
## 5 0.00 0.00 0  
## 6 0.00 1.03 0  
## 8 0.00 0.00 0  
## 9 0.68 0.68 0  
## 17 0.00 0.00 0  
## 19 0.00 2.27 0  
## 20 0.00 0.00 0  
## 23 1.25 0.00 0  
## 31 0.00 1.41 0  
## 38 0.00 0.00 0  
## 42 0.00 0.00 0  
## 60 0.00 0.00 0  
## 79 0.00 0.00 0  
## 81 0.00 0.00 0  
## 85 0.00 0.00 0  
## 90 0.00 0.00 0  
## 101 0.00 0.00 0  
## 118 0.00 0.00 0  
## 139 0.00 0.00 0  
## 140 0.00 0.00 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -48.56 -26.52 0.00 20.90 60.32   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 26.518 17.046 1.556 0.141  
## CountryZAM 18.692 38.117 0.490 0.631  
## CountryUGA -17.575 24.107 -0.729 0.477  
## CountryURT 20.032 29.525 0.678 0.508  
## CountryKEN 24.171 20.487 1.180 0.256  
## CountryETH -6.478 38.117 -0.170 0.867  
##   
## (Dispersion parameter for gaussian family taken to be 1162.303)  
##   
## Null deviance: 23227 on 20 degrees of freedom  
## Residual deviance: 17435 on 15 degrees of freedom  
## AIC: 214.75  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)  
## Country 4.9833 5 0.4179

model2<-glm((Prev\_Sod) ~ Country,data=data\_gp, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -70.51 -17.39 0.00 10.88 68.89   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.91 15.39 0.319 0.75406   
## CountryZAM -2.86 34.41 -0.083 0.93485   
## CountryUGA 65.60 21.76 3.015 0.00871 \*\*  
## CountryURT 67.58 26.65 2.535 0.02285 \*   
## CountryKEN 15.56 18.49 0.841 0.41332   
## CountryETH 15.57 34.41 0.453 0.65737   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 947.1115)  
##   
## Null deviance: 28563 on 20 degrees of freedom  
## Residual deviance: 14207 on 15 degrees of freedom  
## AIC: 210.45  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 15.158 5 0.00971 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model2<-glm((Prev\_Sod) ~ Country,data=data\_gp, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -70.51 -17.39 0.00 10.88 68.89   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 20.471111 10.258392 1.996 0.0645 .  
## CountryZIM -15.561111 18.493580 -0.841 0.4133   
## CountryZAM -18.421111 32.439885 -0.568 0.5785   
## CountryUGA 50.041389 18.493580 2.706 0.0163 \*  
## CountryURT 52.013889 24.058063 2.162 0.0472 \*  
## CountryETH 0.008889 32.439885 0.000 0.9998   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 947.1115)  
##   
## Null deviance: 28563 on 20 degrees of freedom  
## Residual deviance: 14207 on 15 degrees of freedom  
## AIC: 210.45  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 15.158 5 0.00971 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model2<-glm((Prev\_Sod) ~ Country,data=data\_gp, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -70.51 -17.39 0.00 10.88 68.89   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 72.485 21.761 3.331 0.00456 \*\*  
## CountryKEN -52.014 24.058 -2.162 0.04719 \*   
## CountryZIM -67.575 26.652 -2.535 0.02285 \*   
## CountryZAM -70.435 37.692 -1.869 0.08132 .   
## CountryUGA -1.972 26.652 -0.074 0.94198   
## CountryETH -52.005 37.692 -1.380 0.18789   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 947.1115)  
##   
## Null deviance: 28563 on 20 degrees of freedom  
## Residual deviance: 14207 on 15 degrees of freedom  
## AIC: 210.45  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 15.158 5 0.00971 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model2<-glm((Prev\_Sod) ~ Country,data=data\_gp, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -70.51 -17.39 0.00 10.88 68.89   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 70.513 15.388 4.582 0.000359 \*\*\*  
## CountryURT 1.972 26.652 0.074 0.941981   
## CountryKEN -50.041 18.494 -2.706 0.016266 \*   
## CountryZIM -65.602 21.761 -3.015 0.008709 \*\*   
## CountryZAM -68.463 34.408 -1.990 0.065170 .   
## CountryETH -50.032 34.408 -1.454 0.166520   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 947.1115)  
##   
## Null deviance: 28563 on 20 degrees of freedom  
## Residual deviance: 14207 on 15 degrees of freedom  
## AIC: 210.45  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 15.158 5 0.00971 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model2<-glm((Prev\_Sod) ~ Country,data=data\_gp, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -70.51 -17.39 0.00 10.88 68.89   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.05 30.77 0.067 0.9478   
## CountryUGA 68.46 34.41 1.990 0.0652 .  
## CountryURT 70.44 37.69 1.869 0.0813 .  
## CountryKEN 18.42 32.44 0.568 0.5785   
## CountryZIM 2.86 34.41 0.083 0.9349   
## CountryETH 18.43 43.52 0.423 0.6780   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 947.1115)  
##   
## Null deviance: 28563 on 20 degrees of freedom  
## Residual deviance: 14207 on 15 degrees of freedom  
## AIC: 210.45  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 15.158 5 0.00971 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model2<-glm((Prev\_Sod) ~ Country,data=data\_gp, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -70.51 -17.39 0.00 10.88 68.89   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.91 15.39 0.319 0.75406   
## CountryZAM -2.86 34.41 -0.083 0.93485   
## CountryUGA 65.60 21.76 3.015 0.00871 \*\*  
## CountryURT 67.58 26.65 2.535 0.02285 \*   
## CountryKEN 15.56 18.49 0.841 0.41332   
## CountryETH 15.57 34.41 0.453 0.65737   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 947.1115)  
##   
## Null deviance: 28563 on 20 degrees of freedom  
## Residual deviance: 14207 on 15 degrees of freedom  
## AIC: 210.45  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)   
## Country 15.158 5 0.00971 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#------------------------------------------------------------------  
#Gpg  
  
data\_gpg <- subset(data, Species=="Gpg")  
data\_gpg

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc  
## 4 SEN Pout Gpg NI 4 0.00 7.04 1.51  
## 12 BKF Folonzo Gpg F 12 0.00 7.55 0.94  
## 13 BKF Folonzo Gpg M 13 1.89 16.04 0.00  
## 15 GUI Kangoliya Gpg F 15 95.74 0.00 0.00  
## 18 SEN Kayar Gpg NI 18 0.00 1.14 0.00  
## 25 BKF Moussodougou Gpg F 25 0.00 44.87 0.00  
## 30 BKF Comoe Gpg F 30 0.00 2.82 1.41  
## 32 BKF Kartasso Gpg F 32 0.00 0.00 0.00  
## 33 BKF Kartasso Gpg M 33 0.00 0.00 0.00  
## 34 SEN DiackSAFo Peulh Gpg NI 34 0.00 7.69 0.00  
## 35 BKF Moussodougou Gpg M 35 0.00 21.88 0.00  
## 40 MLI Bani Gpg F 40 0.00 1.72 0.00  
## 45 BKF Kampty Gpg F 45 0.00 90.57 1.89  
## 47 BKF Comoe Gpg M 47 0.00 1.92 1.92  
## 48 MLI SEN Gpg M 48 0.00 7.69 1.92  
## 54 BKF Bama Gpg F 54 0.00 0.00 0.00  
## 56 SEN Tambacounda Gpg F 56 0.00 41.46 0.00  
## 57 SEN Tambacounda Gpg M 57 0.00 71.79 0.00  
## 58 SEN SebikoURTe Gpg NI 58 0.00 5.13 0.00  
## 62 MLI SEN Gpg F 62 0.00 0.00 0.00  
## 64 BKF Bama Gpg M 64 0.00 0.00 0.00  
## 65 MLI Banco Gpg F 65 0.00 20.59 0.00  
## 66 BKF Dedougou Gpg F 66 0.00 52.94 0.00  
## 67 MLI Sikasso Gpg F 67 0.00 6.06 0.00  
## 71 GUI Kangoliya Gpg M 71 0.00 0.00 0.00  
## 77 GUI Mini Gpg F 77 0.00 3.45 0.00  
## 78 SEN Hann Gpg NI 78 0.00 0.00 0.00  
## 80 BKF Kampty Gpg M 80 0.00 80.77 0.00  
## 82 GUI Kifala Gpg M 82 0.00 0.00 0.00  
## 83 MLI Sikasso Gpg M 83 0.00 0.00 0.00  
## 84 MLI SS Gpg F 84 0.00 4.00 0.00  
## 86 BKF Kenedougou Gpg F 86 0.00 0.00 0.00  
## 87 MLI SS Gpg M 87 0.00 0.00 0.00  
## 88 BKF Dedougou Gpg M 88 0.00 69.57 4.35  
## 89 GUI Bafing Gpg F 89 0.00 5.00 0.00  
## 91 BKF Kampty Gpg NI 91 0.00 84.21 0.00  
## 92 GUI Tinkisso Gpg M 92 0.00 5.56 0.00  
## 94 BKF Kenedougou Gpg M 94 0.00 0.00 0.00  
## 96 GUI Dekonkore Gpg F 96 0.00 6.25 0.00  
## 97 GUI Mini Gpg M 97 0.00 0.00 0.00  
## 98 SEN Fleuve Gambie Gpg M 98 0.00 43.75 0.00  
## 102 GUI Bafing Gpg M 102 0.00 0.00 0.00  
## 103 GUI Tinkisso Gpg F 103 0.00 7.69 0.00  
## 104 BKF Bouroum bouroum Gpg F 104 0.00 92.31 0.00  
## 106 GUI Karifale Gpg M 106 0.00 8.33 0.00  
## 107 GUI Lemonako Gpg F 107 0.00 0.00 0.00  
## 108 BKF KouriGUIon Gpg F 108 0.00 50.00 0.00  
## 109 MLI Bani Gpg M 109 0.00 0.00 0.00  
## 110 MLI Sybi Gpg F 110 0.00 0.00 0.00  
## 111 MLI Sybi Gpg M 111 0.00 0.00 0.00  
## 113 SEN Fleueve G Gpg F 113 0.00 11.11 0.00  
## 114 BKF KouriGUIon Gpg NI 114 0.00 22.22 0.00  
## 117 GUI Lemonako Gpg M 117 0.00 0.00 0.00  
## 119 SEN Diaguiri Gpg F 119 0.00 0.00 0.00  
## 120 MLI Banco Gpg M 120 0.00 28.57 0.00  
## 121 MLI Baoule Gpg F 121 0.00 42.86 0.00  
## 122 MLI Baoule Gpg M 122 0.00 42.86 0.00  
## 123 MLI Bougouni Gpg M 123 0.00 0.00 0.00  
## 124 BKF Lorepeni Gpg F 124 0.00 71.43 0.00  
## 127 SEN MousSAFlla Gpg M 127 0.00 0.00 0.00  
## 128 MLI Baguineda Gpg F 128 0.00 16.67 0.00  
## 129 MLI Bougouni Gpg F 129 0.00 0.00 0.00  
## 130 MLI Kita Gpg M 130 0.00 16.67 0.00  
## 136 GUI Kifala Gpg F 136 0.00 0.00 0.00  
## 137 BKF Bouroum bouroum Gpg M 137 0.00 80.00 0.00  
## 138 SEN Fleuve Gambie Gpg F 138 0.00 25.00 0.00  
## 143 SEN Niokolo Gpg M 143 0.00 0.00 0.00  
## 145 BKF Lorepeni Gpg M 145 0.00 100.00 0.00  
## 146 BKF KouriGUIon Gpg M 146 0.00 66.67 0.00  
## 147 BKF Ouarkoye Gpg M 147 0.00 100.00 0.00  
## 150 SEN Diaguiri Gpg M 150 0.00 50.00 0.00  
## 151 BKF Ouarkoye Gpg F 151 0.00 100.00 50.00  
## 156 GUI Karifale Gpg F 156 0.00 0.00 0.00  
## 157 SEN Mako Gpg M 157 0.00 100.00 0.00  
## Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 4 2.01 0.50 3.02 0 0.00 0.00 0.00  
## 12 2.83 1.89 0.00 0 0.00 0.00 1.89  
## 13 5.66 5.66 0.00 0 1.89 0.00 2.83  
## 15 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 18 0.00 0.00 1.14 0 0.00 0.00 0.00  
## 25 20.51 12.82 0.00 0 0.00 0.00 11.54  
## 30 1.41 0.00 0.00 0 0.00 0.00 0.00  
## 32 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 33 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 34 1.54 1.54 4.62 0 0.00 0.00 0.00  
## 35 6.25 15.63 0.00 0 0.00 0.00 0.00  
## 40 1.72 0.00 0.00 0 0.00 0.00 0.00  
## 45 62.26 1.89 11.32 0 0.00 0.00 0.00  
## 47 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 48 1.92 3.85 0.00 0 0.00 0.00 0.00  
## 54 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 56 26.83 7.32 0.00 0 0.00 0.00 7.32  
## 57 53.85 2.56 0.00 0 0.00 0.00 15.38  
## 58 5.13 0.00 0.00 0 0.00 0.00 0.00  
## 62 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 64 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 65 20.59 0.00 0.00 0 0.00 0.00 0.00  
## 66 26.47 0.00 23.53 0 0.00 0.00 0.00  
## 67 0.00 6.06 0.00 0 0.00 0.00 0.00  
## 71 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 77 3.45 0.00 0.00 0 0.00 0.00 0.00  
## 78 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 80 65.38 0.00 7.69 0 0.00 0.00 0.00  
## 82 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 83 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 84 4.00 0.00 0.00 0 0.00 0.00 0.00  
## 86 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 87 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 88 30.43 13.04 4.35 0 0.00 4.35 0.00  
## 89 5.00 0.00 0.00 0 0.00 0.00 0.00  
## 91 26.32 5.26 21.05 0 0.00 0.00 0.00  
## 92 5.56 0.00 0.00 0 0.00 0.00 0.00  
## 94 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 96 6.25 0.00 0.00 0 0.00 0.00 0.00  
## 97 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 98 43.75 0.00 0.00 0 0.00 0.00 0.00  
## 102 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 103 7.69 0.00 0.00 0 0.00 0.00 0.00  
## 104 53.85 0.00 23.08 0 0.00 0.00 0.00  
## 106 8.33 0.00 0.00 0 0.00 0.00 0.00  
## 107 8.33 0.00 0.00 0 0.00 0.00 0.00  
## 108 0.00 0.00 33.33 0 0.00 0.00 0.00  
## 109 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 110 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 111 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 113 11.11 0.00 0.00 0 0.00 0.00 0.00  
## 114 0.00 0.00 11.11 0 0.00 0.00 0.00  
## 117 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 119 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 120 28.57 0.00 0.00 0 0.00 0.00 0.00  
## 121 42.86 0.00 0.00 0 0.00 0.00 0.00  
## 122 42.86 0.00 0.00 0 0.00 0.00 0.00  
## 123 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 124 14.29 0.00 28.57 0 0.00 0.00 0.00  
## 127 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 128 16.67 0.00 0.00 0 0.00 0.00 0.00  
## 129 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 130 16.67 0.00 0.00 0 0.00 0.00 0.00  
## 136 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 137 40.00 0.00 20.00 0 0.00 0.00 0.00  
## 138 25.00 0.00 0.00 0 0.00 0.00 0.00  
## 143 66.67 0.00 0.00 0 0.00 0.00 0.00  
## 145 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 146 33.33 0.00 0.00 0 0.00 0.00 0.00  
## 147 33.33 0.00 0.00 0 0.00 0.00 0.00  
## 150 0.00 50.00 0.00 0 0.00 0.00 0.00  
## 151 50.00 0.00 0.00 0 0.00 0.00 0.00  
## 156 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 157 100.00 0.00 0.00 0 0.00 0.00 0.00  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 4 0.00 0.00 0  
## 12 0.00 0.00 0  
## 13 0.00 0.00 0  
## 15 0.00 0.00 0  
## 18 0.00 0.00 0  
## 25 0.00 0.00 0  
## 30 0.00 0.00 0  
## 32 0.00 0.00 0  
## 33 0.00 0.00 0  
## 34 0.00 0.00 0  
## 35 0.00 0.00 0  
## 40 0.00 0.00 0  
## 45 9.43 3.77 0  
## 47 0.00 0.00 0  
## 48 0.00 0.00 0  
## 54 0.00 0.00 0  
## 56 0.00 0.00 0  
## 57 0.00 0.00 0  
## 58 0.00 0.00 0  
## 62 0.00 0.00 0  
## 64 0.00 0.00 0  
## 65 0.00 0.00 0  
## 66 2.94 0.00 0  
## 67 0.00 0.00 0  
## 71 0.00 0.00 0  
## 77 0.00 0.00 0  
## 78 0.00 0.00 0  
## 80 7.69 0.00 0  
## 82 0.00 0.00 0  
## 83 0.00 0.00 0  
## 84 0.00 0.00 0  
## 86 0.00 0.00 0  
## 87 0.00 0.00 0  
## 88 4.35 8.70 0  
## 89 0.00 0.00 0  
## 91 31.58 0.00 0  
## 92 0.00 0.00 0  
## 94 0.00 0.00 0  
## 96 0.00 0.00 0  
## 97 0.00 0.00 0  
## 98 0.00 0.00 0  
## 102 0.00 0.00 0  
## 103 0.00 0.00 0  
## 104 15.38 0.00 0  
## 106 0.00 0.00 0  
## 107 0.00 0.00 0  
## 108 16.67 0.00 0  
## 109 0.00 0.00 0  
## 110 0.00 0.00 0  
## 111 0.00 0.00 0  
## 113 0.00 0.00 0  
## 114 11.11 0.00 0  
## 117 0.00 0.00 0  
## 119 0.00 0.00 0  
## 120 0.00 0.00 0  
## 121 0.00 0.00 0  
## 122 0.00 0.00 0  
## 123 0.00 0.00 0  
## 124 28.57 0.00 0  
## 127 0.00 0.00 0  
## 128 0.00 0.00 0  
## 129 0.00 0.00 0  
## 130 0.00 0.00 0  
## 136 0.00 0.00 0  
## 137 20.00 0.00 0  
## 138 0.00 0.00 0  
## 143 0.00 0.00 0  
## 145 66.67 33.33 0  
## 146 33.33 0.00 0  
## 147 33.33 33.33 0  
## 150 0.00 0.00 0  
## 151 0.00 0.00 0  
## 156 0.00 0.00 0  
## 157 0.00 0.00 0

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -44.453 -17.072 -2.419 15.430 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 24.274 7.268 3.340 0.00135 \*\*  
## CountryMLI -13.847 9.842 -1.407 0.16386   
## CountryGUI -21.855 10.279 -2.126 0.03702 \*   
## CountryBKF 20.179 9.127 2.211 0.03032 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 792.4573)  
##   
## Null deviance: 76638 on 73 degrees of freedom  
## Residual deviance: 55472 on 70 degrees of freedom  
## AIC: 709.85  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 26.709 3 6.776e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

model2<-glm((Prev\_Sod) ~ Country,data=data\_gpg, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.383 -0.073 -0.073 0.000 89.357   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.424e-14 2.855e+00 0.000 1.000  
## CountryMLI -1.781e-14 3.866e+00 0.000 1.000  
## CountryGUI 6.383e+00 4.038e+00 1.581 0.118  
## CountryBKF 7.269e-02 3.585e+00 0.020 0.984  
##   
## (Dispersion parameter for gaussian family taken to be 122.2644)  
##   
## Null deviance: 9040.9 on 73 degrees of freedom  
## Residual deviance: 8558.5 on 70 degrees of freedom  
## AIC: 571.55  
##   
## Number of Fisher Scoring iterations: 2

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)  
## Country 3.9456 3 0.2674

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_Tspp) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -44.453 -17.072 -2.419 15.430 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.419 7.268 0.333 0.740   
## CountrySEN 21.855 10.279 2.126 0.037 \*   
## CountryMLI 8.009 9.842 0.814 0.419   
## CountryBKF 42.034 9.127 4.605 1.79e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 792.4573)  
##   
## Null deviance: 76638 on 73 degrees of freedom  
## Residual deviance: 55472 on 70 degrees of freedom  
## AIC: 709.85  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 26.709 3 6.776e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_Tspp) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -44.453 -17.072 -2.419 15.430 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 10.427 6.635 1.572 0.120574   
## CountryGUI -8.009 9.842 -0.814 0.418547   
## CountrySEN 13.847 9.842 1.407 0.163860   
## CountryBKF 34.025 8.632 3.942 0.000189 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 792.4573)  
##   
## Null deviance: 76638 on 73 degrees of freedom  
## Residual deviance: 55472 on 70 degrees of freedom  
## AIC: 709.85  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 26.709 3 6.776e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_Tspp) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -44.453 -17.072 -2.419 15.430 75.726   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 24.274 7.268 3.340 0.00135 \*\*  
## CountryMLI -13.847 9.842 -1.407 0.16386   
## CountryGUI -21.855 10.279 -2.126 0.03702 \*   
## CountryBKF 20.179 9.127 2.211 0.03032 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 792.4573)  
##   
## Null deviance: 76638 on 73 degrees of freedom  
## Residual deviance: 55472 on 70 degrees of freedom  
## AIC: 709.85  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 26.709 3 6.776e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------  
#Gt  
  
data\_gt <- subset(data, Species=="Gt")  
data\_gt

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 2 BKF Comoe Gt F 2 0 16.54 1.10 13.24  
## 3 BKF Comoe Gt M 3 0 15.00 3.64 11.36  
## 11 BKF Folonzo Gt F 11 0 18.87 1.89 12.26  
## 14 BKF Folonzo Gt M 14 0 32.63 2.11 27.37  
## 24 GHA Walewale Gt M 24 0 53.85 3.85 12.82  
## 43 GHA Walewale Gt F 43 0 66.04 1.89 9.43  
## 44 BKF Arly Gt F 44 0 1.89 0.00 0.00  
## 55 BKF Arly Gt M 55 0 0.00 0.00 0.00  
## 69 GHA MorURTi Gt M 69 0 50.00 0.00 15.63  
## 70 BKF Sissili Gt M 70 0 25.00 12.50 12.50  
## 95 GHA Bougouhiya Gt F 95 0 18.75 0.00 6.25  
## 99 BKF Sissili Gt F 99 0 13.33 6.67 6.67  
## 112 GHA MorURTi Gt F 112 0 66.67 0.00 0.00  
## 116 GHA Fumbissi Gt F 116 0 100.00 0.00 0.00  
## 125 GHA Fumbissi Gt M 125 0 100.00 0.00 66.67  
## 126 GHA Grogro Gt M 126 0 100.00 0.00 0.00  
## 133 GHA Grogro Gt F 133 0 100.00 0.00 80.00  
## 134 GHA Kumpole Gt F 134 0 100.00 0.00 40.00  
## 135 GHA Sissili Bidge Gt F 135 0 100.00 0.00 20.00  
## 142 GHA Bougouhiya Gt M 142 0 0.00 0.00 0.00  
## 148 GHA Kumpole Gt M 148 0 100.00 0.00 50.00  
## 149 GHA Psikp\_ Gt M 149 0 100.00 0.00 0.00  
## 152 GHA Kandiaga Gt M 152 0 100.00 0.00 0.00  
## 153 GHA Sissili Bidge Gt M 153 0 100.00 0.00 0.00  
## 154 GHA Nabogo Gt F 154 0 0.00 0.00 0.00  
## 155 GHA Volta Blanche Gt F 155 0 0.00 0.00 0.00  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 2 0.37 0 0.74 1.10 0 0.00 0  
## 3 0.00 0 0.00 0.00 0 0.00 0  
## 11 1.89 0 1.89 0.94 0 0.00 0  
## 14 1.05 0 0.00 1.05 0 1.05 0  
## 24 8.97 0 0.00 10.26 0 14.10 0  
## 43 24.53 0 0.00 16.98 0 7.55 0  
## 44 1.89 0 0.00 0.00 0 0.00 0  
## 55 0.00 0 0.00 0.00 0 0.00 0  
## 69 15.63 0 0.00 18.75 0 0.00 0  
## 70 0.00 0 0.00 0.00 0 0.00 0  
## 95 0.00 0 0.00 0.00 0 12.50 0  
## 99 0.00 0 0.00 0.00 0 0.00 0  
## 112 33.33 0 0.00 22.22 0 11.11 0  
## 116 37.50 0 0.00 0.00 0 62.50 0  
## 125 33.33 0 0.00 0.00 0 0.00 0  
## 126 16.67 0 0.00 0.00 0 83.33 0  
## 133 20.00 0 0.00 0.00 0 0.00 0  
## 134 60.00 0 0.00 0.00 0 0.00 0  
## 135 80.00 0 0.00 0.00 0 0.00 0  
## 142 0.00 0 0.00 0.00 0 0.00 0  
## 148 50.00 0 0.00 0.00 0 0.00 0  
## 149 50.00 0 0.00 0.00 0 50.00 0  
## 152 100.00 0 0.00 0.00 0 0.00 0  
## 153 100.00 0 0.00 0.00 0 0.00 0  
## 154 0.00 0 0.00 0.00 0 0.00 0  
## 155 0.00 0 0.00 0.00 0 0.00 0  
## Prev\_TzTsg Prev\_TcTvTz  
## 2 0 0.00  
## 3 0 0.00  
## 11 0 0.00  
## 14 0 0.00  
## 24 0 1.28  
## 43 0 5.66  
## 44 0 0.00  
## 55 0 0.00  
## 69 0 0.00  
## 70 0 0.00  
## 95 0 0.00  
## 99 0 0.00  
## 112 0 0.00  
## 116 0 0.00  
## 125 0 0.00  
## 126 0 0.00  
## 133 0 0.00  
## 134 0 0.00  
## 135 0 0.00  
## 142 0 0.00  
## 148 0 0.00  
## 149 0 0.00  
## 152 0 0.00  
## 153 0 0.00  
## 154 0 0.00  
## 155 0 0.00

model1<-glm((Prev\_Tspp) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tspp) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -69.739 -14.935 2.297 30.261 30.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 69.739 8.028 8.687 7.12e-09 \*\*\*  
## CountryBKF -54.332 14.472 -3.754 0.000978 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1159.976)  
##   
## Null deviance: 44189 on 25 degrees of freedom  
## Residual deviance: 27839 on 24 degrees of freedom  
## AIC: 261.16  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tspp)  
## LR Chisq Df Pr(>Chisq)   
## Country 14.095 1 0.0001738 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

model2<-glm((Prev\_Sod) ~ Country,data=data\_gt, family=gaussian())  
summary(model2)

##   
## Call:  
## glm(formula = (Prev\_Sod) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0 0 NA NA  
## CountryBKF 0 0 NA NA  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 0 on 25 degrees of freedom  
## Residual deviance: 0 on 24 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Sod)  
## LR Chisq Df Pr(>Chisq)  
## Country 1

## Selecting the GLM model for trypanosome species and mixed infection

#TC selection model  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_Tc) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_Tc) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_Tc) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_Tc) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model2 11 1077.78 0.00 0.43 0.43 -526.97  
## model4 23 1078.08 0.30 0.37 0.81 -511.86  
## model3 27 1079.90 2.12 0.15 0.96 -507.04  
## model1 16 1082.45 4.67 0.04 1.00 -523.27  
## model6 100 1416.98 339.20 0.00 1.00 -424.85  
## model5 103 1455.28 377.50 0.00 1.00 -418.64

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.764 2.304 2.068 0.04048 \*   
## CountryZAM -3.394 7.641 -0.444 0.65759   
## CountrySAF 0.126 3.456 0.036 0.97097   
## CountryUGA -2.162 3.990 -0.542 0.58881   
## CountryURT 4.983 3.762 1.324 0.18751   
## CountrySWA -4.764 7.641 -0.623 0.53398   
## CountrySEN -4.663 2.974 -1.568 0.11915   
## CountryZAI -4.764 7.641 -0.623 0.53398   
## CountryMOZ -1.764 5.643 -0.313 0.75506   
## CountryMLI -4.657 2.873 -1.621 0.10729   
## CountryKEN 9.890 3.119 3.170 0.00187 \*\*  
## CountryETH 1.336 7.641 0.175 0.86145   
## CountryGUI -4.764 2.974 -1.602 0.11145   
## CountryGHA -4.445 2.873 -1.547 0.12411   
## CountryBKF -1.360 2.558 -0.532 0.59568   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tc)  
## LR Chisq Df Pr(>Chisq)   
## Country 47.741 14 1.451e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#model2 is the best AICc=1084.04  
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tc)  
## LR Chisq Df Pr(>Chisq)   
## Species 40.364 9 6.527e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------------------  
#Tv selection model  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_Tv) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_Tv) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_Tv) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_Tv) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model2 11 1352.64 0.00 0.51 0.51 -664.40  
## model1 16 1352.73 0.09 0.49 1.00 -658.41  
## model4 23 1368.94 16.30 0.00 1.00 -657.29  
## model3 27 1380.29 27.66 0.00 1.00 -657.24  
## model6 100 1652.45 299.82 0.00 1.00 -542.59  
## model5 103 1703.17 350.54 0.00 1.00 -542.59

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.5560 5.4787 0.101 0.91931   
## CountryZAM 0.1240 18.1708 0.007 0.99456   
## CountrySAF 0.3465 8.2180 0.042 0.96643   
## CountryUGA -0.1300 9.4894 -0.014 0.98909   
## CountryURT 1.2173 8.9467 0.136 0.89196   
## CountrySWA -0.5560 18.1708 -0.031 0.97563   
## CountrySEN 21.8367 7.0730 3.087 0.00243 \*\*  
## CountryZAI 2.3040 18.1708 0.127 0.89928   
## CountryMOZ 0.4440 13.4200 0.033 0.97365   
## CountryMLI 9.2140 6.8331 1.348 0.17968   
## CountryKEN 4.2640 7.4182 0.575 0.56634   
## CountryETH 0.0940 18.1708 0.005 0.99588   
## CountryGUI 2.4180 7.0730 0.342 0.73296   
## CountryGHA 16.1551 6.8331 2.364 0.01943 \*   
## CountryBKF 14.6205 6.0825 2.404 0.01753 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tv)  
## LR Chisq Df Pr(>Chisq)   
## Country 27.404 14 0.01705 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#model1 is the best AICc= 1360.14   
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tv)  
## LR Chisq Df Pr(>Chisq)   
## Species 15.475 9 0.07868 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------------------  
#Tz selection model  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_Tz) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_Tz) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_Tz) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_Tz) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model1 16 1260.42 0.00 1 1 -612.25  
## model4 23 1272.68 12.25 0 1 -609.16  
## model2 11 1283.49 23.07 0 1 -629.83  
## model3 27 1284.10 23.68 0 1 -609.14  
## model6 100 1444.79 184.37 0 1 -438.76  
## model5 103 1495.05 234.63 0 1 -438.53

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.0250 4.0756 0.251 0.802   
## CountryZAM -0.3450 13.5173 -0.026 0.980   
## CountrySAF 2.9287 6.1134 0.479 0.633   
## CountryUGA -0.0130 7.0591 -0.002 0.999   
## CountryURT 4.0150 6.6554 0.603 0.547   
## CountrySWA -1.0250 13.5173 -0.076 0.940   
## CountrySEN 3.1030 5.2616 0.590 0.556   
## CountryZAI -1.0250 13.5173 -0.076 0.940   
## CountryMOZ -1.0250 9.9832 -0.103 0.918   
## CountryMLI -0.4744 5.0832 -0.093 0.926   
## CountryKEN -0.6000 5.5184 -0.109 0.914   
## CountryETH 0.0650 13.5173 0.005 0.996   
## CountryGUI -1.0250 5.2616 -0.195 0.846   
## CountryGHA 33.9728 5.0832 6.683 5.02e-10 \*\*\*  
## CountryBKF 1.9827 4.5248 0.438 0.662   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tz)  
## LR Chisq Df Pr(>Chisq)   
## Country 106.11 14 3.167e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#model1 is the best AICc= 1267.24  
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tz)  
## LR Chisq Df Pr(>Chisq)   
## Species 58.253 9 2.906e-09 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------------------  
#Tsg selection model  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_Tsg) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_Tsg) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_Tsg) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_Tsg) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model2 11 1203.33 0.00 0.78 0.78 -589.75  
## model1 16 1205.83 2.50 0.22 1.00 -584.96  
## model4 23 1214.77 11.45 0.00 1.00 -580.21  
## model3 27 1223.72 20.40 0.00 1.00 -578.96  
## model6 100 1364.93 161.60 0.00 1.00 -398.83  
## model5 103 1409.96 206.63 0.00 1.00 -395.98

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 16.343 3.421 4.777 4.42e-06 \*\*\*  
## CountryZAM 18.587 11.347 1.638 0.103654   
## CountrySAF -5.649 5.132 -1.101 0.272872   
## CountryUGA -11.315 5.926 -1.909 0.058245 .   
## CountryURT -9.540 5.587 -1.707 0.089940 .   
## CountrySWA -16.343 11.347 -1.440 0.152018   
## CountrySEN -15.758 4.417 -3.568 0.000493 \*\*\*  
## CountryZAI -16.343 11.347 -1.440 0.152018   
## CountryMOZ -13.343 8.381 -1.592 0.113597   
## CountryMLI -16.343 4.267 -3.830 0.000192 \*\*\*  
## CountryKEN -1.720 4.633 -0.371 0.711037   
## CountryETH -5.883 11.347 -0.518 0.604963   
## CountryGUI -16.343 4.417 -3.700 0.000308 \*\*\*  
## CountryGHA -16.343 4.267 -3.830 0.000192 \*\*\*  
## CountryBKF -12.063 3.798 -3.176 0.001835 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tsg)  
## LR Chisq Df Pr(>Chisq)   
## Country 44.737 14 4.5e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#model2 is the best AICc=1210.49  
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_Tsg)  
## LR Chisq Df Pr(>Chisq)   
## Species 34.871 9 6.28e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------------------  
#TcTv selection model  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_TcTv) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_TcTv) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_TcTv) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_TcTv) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model1 16 487.19 0.00 0.71 0.71 -225.64  
## model2 11 489.12 1.93 0.27 0.98 -232.64  
## model4 23 494.45 7.26 0.02 1.00 -220.04  
## model3 27 502.03 14.84 0.00 1.00 -218.11  
## model6 100 763.59 276.41 0.00 1.00 -98.16  
## model5 103 814.32 327.13 0.00 1.00 -98.16

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.955e-15 3.419e-01 0.000 1.000   
## CountryZAM -1.108e-14 1.134e+00 0.000 1.000   
## CountrySAF 2.362e-01 5.128e-01 0.461 0.646   
## CountryUGA -5.150e-15 5.922e-01 0.000 1.000   
## CountryURT -2.163e-14 5.583e-01 0.000 1.000   
## CountrySWA -1.589e-14 1.134e+00 0.000 1.000   
## CountrySEN -5.951e-15 4.414e-01 0.000 1.000   
## CountryZAI -1.082e-14 1.134e+00 0.000 1.000   
## CountryMOZ -1.477e-14 8.374e-01 0.000 1.000   
## CountryMLI -5.405e-15 4.264e-01 0.000 1.000   
## CountryKEN 2.045e+00 4.629e-01 4.418 1.97e-05 \*\*\*  
## CountryETH -6.762e-15 1.134e+00 0.000 1.000   
## CountryGUI -5.751e-15 4.414e-01 0.000 1.000   
## CountryGHA -5.573e-15 4.264e-01 0.000 1.000   
## CountryBKF 2.163e-01 3.796e-01 0.570 0.570   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TcTv)  
## LR Chisq Df Pr(>Chisq)   
## Country 38.037 14 0.000513 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#model1 is the best AICc= 489.05  
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TcTv)  
## LR Chisq Df Pr(>Chisq)   
## Species 23.46 9 0.005242 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------------------  
#TcTz selection model  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_TcTz) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_TcTz) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_TcTz) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_TcTz) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model2 11 766.95 0.00 0.88 0.88 -371.56  
## model1 16 770.90 3.96 0.12 1.00 -367.49  
## model4 23 787.67 20.72 0.00 1.00 -366.65  
## model3 27 799.03 32.08 0.00 1.00 -366.61  
## model6 100 799.64 32.70 0.00 1.00 -116.19  
## model5 103 847.28 80.33 0.00 1.00 -114.64

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.194e-15 8.488e-01 0.000 1.000000   
## CountryZAM -5.394e-15 2.815e+00 0.000 1.000000   
## CountrySAF -3.226e-16 1.273e+00 0.000 1.000000   
## CountryUGA -2.595e-15 1.470e+00 0.000 1.000000   
## CountryURT 2.350e-01 1.386e+00 0.170 0.865610   
## CountrySWA -5.910e-15 2.815e+00 0.000 1.000000   
## CountrySEN -3.719e-15 1.096e+00 0.000 1.000000   
## CountryZAI 1.144e-16 2.815e+00 0.000 1.000000   
## CountryMOZ 4.144e-15 2.079e+00 0.000 1.000000   
## CountryMLI -5.334e-16 1.059e+00 0.000 1.000000   
## CountryKEN 3.342e-01 1.149e+00 0.291 0.771656   
## CountryETH -2.672e-15 2.815e+00 0.000 1.000000   
## CountryGUI -3.155e-15 1.096e+00 0.000 1.000000   
## CountryGHA 3.789e+00 1.059e+00 3.580 0.000472 \*\*\*  
## CountryBKF 3.586e-01 9.423e-01 0.381 0.704107   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TcTz)  
## LR Chisq Df Pr(>Chisq)   
## Country 29.822 14 0.008075 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#model2 is the best AICc= 770.69   
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TcTz)  
## LR Chisq Df Pr(>Chisq)   
## Species 21.903 9 0.009192 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------------------  
#TcTsg selection model  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_TcTsg) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_TcTsg) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_TcTsg) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_TcTsg) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model4 23 741.85 0.00 0.46 0.46 -343.74  
## model5 103 742.24 0.39 0.38 0.85 -62.12  
## model3 27 744.18 2.34 0.14 0.99 -339.19  
## model2 11 749.43 7.59 0.01 1.00 -362.80  
## model1 16 757.86 16.01 0.00 1.00 -360.97  
## model6 100 949.58 207.73 0.00 1.00 -191.15

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.6800 0.8140 2.064 0.0409 \*  
## CountryZAM 5.8500 2.6998 2.167 0.0319 \*  
## CountrySAF -1.2250 1.2210 -1.003 0.3175   
## CountryUGA -1.4680 1.4099 -1.041 0.2996   
## CountryURT 2.9833 1.3293 2.244 0.0264 \*  
## CountrySWA -1.6800 2.6998 -0.622 0.5348   
## CountrySEN -1.6800 1.0509 -1.599 0.1121   
## CountryZAI -1.6800 2.6998 -0.622 0.5348   
## CountryMOZ -1.6800 1.9939 -0.843 0.4009   
## CountryMLI -1.6800 1.0153 -1.655 0.1002   
## CountryKEN 2.7083 1.1022 2.457 0.0152 \*  
## CountryETH -1.0300 2.6998 -0.382 0.7034   
## CountryGUI -1.6800 1.0509 -1.599 0.1121   
## CountryGHA -1.6800 1.0153 -1.655 0.1002   
## CountryBKF -1.5788 0.9037 -1.747 0.0828 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TcTsg)  
## LR Chisq Df Pr(>Chisq)   
## Country 55.075 14 8.404e-07 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#Model3 is the best AICc = 750.40   
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TcTsg)  
## LR Chisq Df Pr(>Chisq)   
## Species 52.321 9 3.93e-08 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#-------------------------------------------------------------------------  
#TvTz selection model  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_TvTz) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_TvTz) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_TvTz) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_TvTz) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model1 16 1143.40 0.00 0.66 0.66 -553.74  
## model2 11 1144.76 1.36 0.34 1.00 -560.46  
## model4 23 1161.80 18.40 0.00 1.00 -553.72  
## model3 27 1173.25 29.84 0.00 1.00 -553.72  
## model6 100 1571.22 427.82 0.00 1.00 -501.98  
## model5 103 1621.93 478.53 0.00 1.00 -501.96

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.951e-16 2.801e+00 0.000 1.000000   
## CountryZAM -6.294e-15 9.290e+00 0.000 1.000000   
## CountrySAF -5.800e-16 4.201e+00 0.000 1.000000   
## CountryUGA 1.167e-15 4.851e+00 0.000 1.000000   
## CountryURT 2.350e-01 4.574e+00 0.051 0.959097   
## CountrySWA 1.059e-15 9.290e+00 0.000 1.000000   
## CountrySEN 1.513e+00 3.616e+00 0.419 0.676212   
## CountryZAI -5.622e-15 9.290e+00 0.000 1.000000   
## CountryMOZ 4.382e-15 6.861e+00 0.000 1.000000   
## CountryMLI -1.316e-16 3.493e+00 0.000 1.000000   
## CountryKEN 8.583e-02 3.793e+00 0.023 0.981976   
## CountryETH -8.040e-15 9.290e+00 0.000 1.000000   
## CountryGUI 0.000e+00 3.616e+00 0.000 1.000000   
## CountryGHA 1.339e+01 3.493e+00 3.834 0.000189 \*\*\*  
## CountryBKF 4.800e-01 3.110e+00 0.154 0.877548   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TvTz)  
## LR Chisq Df Pr(>Chisq)   
## Country 35.005 14 0.001467 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#model1 is the best AICc = 1149.47   
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TvTz)  
## LR Chisq Df Pr(>Chisq)   
## Species 21.204 9 0.01177 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#---------------------------------------------------------------------------  
#TvTsg selection model  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_TvTsg) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_TvTsg) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_TvTsg) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_TvTsg) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model4 23 1083.12 0.00 0.97 0.97 -514.38  
## model1 16 1090.71 7.59 0.02 0.99 -527.40  
## model2 11 1093.22 10.10 0.01 1.00 -534.69  
## model3 27 1094.08 10.96 0.00 1.00 -514.14  
## model6 100 1402.52 319.40 0.00 1.00 -417.62  
## model5 103 1451.91 368.79 0.00 1.00 -416.95

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.773e-15 2.366e+00 0.000 1.000   
## CountryZAM -6.818e-14 7.846e+00 0.000 1.000   
## CountrySAF -1.283e-14 3.548e+00 0.000 1.000   
## CountryUGA -7.956e-16 4.097e+00 0.000 1.000   
## CountryURT 1.142e+00 3.863e+00 0.296 0.768   
## CountrySWA 7.575e-15 7.846e+00 0.000 1.000   
## CountrySEN 2.589e-15 3.054e+00 0.000 1.000   
## CountryZAI -2.430e-14 7.846e+00 0.000 1.000   
## CountryMOZ 1.000e+00 5.795e+00 0.173 0.863   
## CountryMLI 1.225e-14 2.951e+00 0.000 1.000   
## CountryKEN 1.042e-01 3.203e+00 0.033 0.974   
## CountryETH 4.400e-01 7.846e+00 0.056 0.955   
## CountryGUI -3.846e-15 3.054e+00 0.000 1.000   
## CountryGHA 8.723e-15 2.951e+00 0.000 1.000   
## CountryBKF 6.536e+00 2.626e+00 2.489 0.014 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TvTsg)  
## LR Chisq Df Pr(>Chisq)   
## Country 23.266 14 0.05607 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#model4 is the best AICc = 1088.66  
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TvTsg)  
## LR Chisq Df Pr(>Chisq)  
## Species 8.9004 9 0.4465

#----------------------------------------------------------------------------  
  
#TzTsg selection model  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_TzTsg) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_TzTsg) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_TzTsg) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_TzTsg) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model2 11 881.89 0.00 0.98 0.98 -429.03  
## model1 16 889.56 7.68 0.02 1.00 -426.82  
## model4 23 900.88 18.99 0.00 1.00 -423.26  
## model3 27 912.31 30.42 0.00 1.00 -423.25  
## model6 100 1322.73 440.84 0.00 1.00 -377.73  
## model5 103 1373.45 491.57 0.00 1.00 -377.73

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -2.222e-15 1.242e+00 0.000 1.000  
## CountryZAM -1.814e-14 4.118e+00 0.000 1.000  
## CountrySAF -1.850e-15 1.862e+00 0.000 1.000  
## CountryUGA 1.740e-15 2.150e+00 0.000 1.000  
## CountryURT 5.533e-01 2.027e+00 0.273 0.785  
## CountrySWA 1.445e-15 4.118e+00 0.000 1.000  
## CountrySEN 1.765e-15 1.603e+00 0.000 1.000  
## CountryZAI -6.094e-15 4.118e+00 0.000 1.000  
## CountryMOZ 1.689e-15 3.041e+00 0.000 1.000  
## CountryMLI 5.128e-15 1.549e+00 0.000 1.000  
## CountryKEN 2.750e-01 1.681e+00 0.164 0.870  
## CountryETH 6.500e-01 4.118e+00 0.158 0.875  
## CountryGUI 7.305e-16 1.603e+00 0.000 1.000  
## CountryGHA 3.877e-15 1.549e+00 0.000 1.000  
## CountryBKF 1.840e+00 1.378e+00 1.335 0.184  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TzTsg)  
## LR Chisq Df Pr(>Chisq)  
## Country 6.5477 14 0.9507

#model2 is the best AICc = 886.37   
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TzTsg)  
## LR Chisq Df Pr(>Chisq)  
## Species 2.5265 9 0.9802

#----------------------------------------------------------------------------  
  
#TcTvTz selection model  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
model2<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
model3<-glm((Prev\_TcTvTz) ~ Country\*Species,data=data, family=gaussian())  
model4<-glm((Prev\_TcTvTz) ~ Country+Species,data=data, family=gaussian())  
model5<-glm((Prev\_TcTvTz) ~ Country\*Species+Localisation,data=data, family=gaussian())  
model6<-glm((Prev\_TcTvTz) ~ Country+Species+Localisation,data=data, family=gaussian())  
  
#AICc(model1, model2, model3, model4)  
model.set <- list(model1, model2, model3, model4, model5, model6)  
model.names <- c("model1", "model2","model3", "model4", "model5", "model6")  
  
aictab(model.set, modnames = model.names)

##   
## Model selection based on AICc:  
##   
## K AICc Delta\_AICc AICcWt Cum.Wt LL  
## model2 11 265.19 0.00 1 1 -120.68  
## model4 23 292.69 27.51 0 1 -119.17  
## model3 27 304.14 38.96 0 1 -119.17  
## model1 16 307.67 42.49 0 1 -135.88  
## model6 100 672.31 407.12 0 1 -52.52  
## model5 103 723.04 457.85 0 1 -52.52

summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.150e-17 1.923e-01 0.000 1.000  
## CountryZAM -1.619e-15 6.378e-01 0.000 1.000  
## CountrySAF -6.904e-16 2.885e-01 0.000 1.000  
## CountryUGA -3.656e-16 3.331e-01 0.000 1.000  
## CountryURT 2.697e-16 3.140e-01 0.000 1.000  
## CountrySWA -1.530e-16 6.378e-01 0.000 1.000  
## CountrySEN 1.372e-16 2.483e-01 0.000 1.000  
## CountryZAI -7.134e-16 6.378e-01 0.000 1.000  
## CountryMOZ -3.098e-16 4.711e-01 0.000 1.000  
## CountryMLI 3.191e-16 2.398e-01 0.000 1.000  
## CountryKEN 2.307e-16 2.604e-01 0.000 1.000  
## CountryETH -9.883e-16 6.378e-01 0.000 1.000  
## CountryGUI 1.577e-17 2.483e-01 0.000 1.000  
## CountryGHA 3.856e-01 2.398e-01 1.607 0.110  
## CountryBKF 1.549e-01 2.135e-01 0.725 0.469  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TcTvTz)  
## LR Chisq Df Pr(>Chisq)  
## Country 6.8186 14 0.9415

#model2 is the best AICc = 265.72   
Anova(model2)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: (Prev\_TcTvTz)  
## LR Chisq Df Pr(>Chisq)   
## Species 39.998 9 7.605e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Statistics for Supplementary table 3

#======== Glm Tc per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.4037 1.1110 3.064 0.00262 \*\*   
## CountryZIM 1.3603 2.5578 0.532 0.59568   
## CountryZAM -2.0337 7.3697 -0.276 0.78298   
## CountrySAF 1.4863 2.8052 0.530 0.59706   
## CountryUGA -0.8017 3.4424 -0.233 0.81618   
## CountryURT 6.3429 3.1750 1.998 0.04766 \*   
## CountrySWA -3.4037 7.3697 -0.462 0.64490   
## CountrySEN -3.3031 2.1847 -1.512 0.13279   
## CountryZAI -3.4037 7.3697 -0.462 0.64490   
## CountryMOZ -0.4037 5.2700 -0.077 0.93904   
## CountryMLI -3.2971 2.0453 -1.612 0.10919   
## CountryKEN 11.2504 2.3785 4.730 5.39e-06 \*\*\*  
## CountryETH 2.6963 7.3697 0.366 0.71502   
## CountryGUI -3.4037 2.1847 -1.558 0.12148   
## CountryGHA -3.0848 2.0453 -1.508 0.13372   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.3189 1.7172 0.186 0.85294   
## CountryBKF 3.0848 2.0453 1.508 0.13372   
## CountryZIM 4.4451 2.8734 1.547 0.12411   
## CountryZAM 1.0511 7.4851 0.140 0.88852   
## CountrySAF 4.5711 3.0957 1.477 0.14201   
## CountryUGA 2.2831 3.6830 0.620 0.53632   
## CountryURT 9.4278 3.4344 2.745 0.00684 \*\*   
## CountrySWA -0.3189 7.4851 -0.043 0.96608   
## CountrySEN -0.2182 2.5470 -0.086 0.93184   
## CountryZAI -0.3189 7.4851 -0.043 0.96608   
## CountryMOZ 2.6811 5.4302 0.494 0.62226   
## CountryMLI -0.2122 2.4285 -0.087 0.93049   
## CountryKEN 14.3353 2.7151 5.280 4.79e-07 \*\*\*  
## CountryETH 5.7811 7.4851 0.772 0.44120   
## CountryGUI -0.3189 2.5470 -0.125 0.90054   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.204e-14 1.881e+00 0.000 1.00000   
## CountryGHA 3.189e-01 2.547e+00 0.125 0.90054   
## CountryBKF 3.404e+00 2.185e+00 1.558 0.12148   
## CountryZIM 4.764e+00 2.974e+00 1.602 0.11145   
## CountryZAM 1.370e+00 7.524e+00 0.182 0.85579   
## CountrySAF 4.890e+00 3.190e+00 1.533 0.12748   
## CountryUGA 2.602e+00 3.762e+00 0.692 0.49031   
## CountryURT 9.747e+00 3.519e+00 2.770 0.00637 \*\*   
## CountrySWA 5.479e-15 7.524e+00 0.000 1.00000   
## CountrySEN 1.007e-01 2.660e+00 0.038 0.96987   
## CountryZAI -3.096e-14 7.524e+00 0.000 1.00000   
## CountryMOZ 3.000e+00 5.484e+00 0.547 0.58523   
## CountryMLI 1.067e-01 2.547e+00 0.042 0.96665   
## CountryKEN 1.465e+01 2.822e+00 5.194 7.08e-07 \*\*\*  
## CountryETH 6.100e+00 7.524e+00 0.811 0.41890   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.100 7.285 0.837 0.404  
## CountryGUI -6.100 7.524 -0.811 0.419  
## CountryGHA -5.781 7.485 -0.772 0.441  
## CountryBKF -2.696 7.370 -0.366 0.715  
## CountryZIM -1.336 7.641 -0.175 0.861  
## CountryZAM -4.730 10.303 -0.459 0.647  
## CountrySAF -1.210 7.727 -0.157 0.876  
## CountryUGA -3.498 7.981 -0.438 0.662  
## CountryURT 3.647 7.869 0.463 0.644  
## CountrySWA -6.100 10.303 -0.592 0.555  
## CountrySEN -5.999 7.524 -0.797 0.427  
## CountryZAI -6.100 10.303 -0.592 0.555  
## CountryMOZ -3.100 8.923 -0.347 0.729  
## CountryMLI -5.993 7.485 -0.801 0.425  
## CountryKEN 8.554 7.583 1.128 0.261  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 14.654 2.103 6.968 1.13e-10 \*\*\*  
## CountryETH -8.554 7.583 -1.128 0.26120   
## CountryGUI -14.654 2.822 -5.194 7.08e-07 \*\*\*  
## CountryGHA -14.335 2.715 -5.280 4.79e-07 \*\*\*  
## CountryBKF -11.250 2.379 -4.730 5.39e-06 \*\*\*  
## CountryZIM -9.890 3.119 -3.170 0.00187 \*\*   
## CountryZAM -13.284 7.583 -1.752 0.08197 .   
## CountrySAF -9.764 3.325 -2.936 0.00388 \*\*   
## CountryUGA -12.052 3.878 -3.108 0.00228 \*\*   
## CountryURT -4.908 3.643 -1.347 0.18007   
## CountrySWA -14.654 7.583 -1.933 0.05530 .   
## CountrySEN -14.554 2.822 -5.158 8.31e-07 \*\*\*  
## CountryZAI -14.654 7.583 -1.933 0.05530 .   
## CountryMOZ -11.654 5.564 -2.094 0.03801 \*   
## CountryMLI -14.547 2.715 -5.358 3.35e-07 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1067 1.7172 0.062 0.95056   
## CountryKEN 14.5475 2.7151 5.358 3.35e-07 \*\*\*  
## CountryETH 5.9933 7.4851 0.801 0.42465   
## CountryGUI -0.1067 2.5470 -0.042 0.96665   
## CountryGHA 0.2122 2.4285 0.087 0.93049   
## CountryBKF 3.2971 2.0453 1.612 0.10919   
## CountryZIM 4.6573 2.8734 1.621 0.10729   
## CountryZAM 1.2633 7.4851 0.169 0.86621   
## CountrySAF 4.7833 3.0957 1.545 0.12455   
## CountryUGA 2.4953 3.6830 0.678 0.49918   
## CountryURT 9.6400 3.4344 2.807 0.00571 \*\*   
## CountrySWA -0.1067 7.4851 -0.014 0.98865   
## CountrySEN -0.0060 2.5470 -0.002 0.99812   
## CountryZAI -0.1067 7.4851 -0.014 0.98865   
## CountryMOZ 2.8933 5.4302 0.533 0.59500   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.0000 5.1516 0.582 0.561   
## CountryMLI -2.8933 5.4302 -0.533 0.595   
## CountryKEN 11.6542 5.5643 2.094 0.038 \*  
## CountryETH 3.1000 8.9228 0.347 0.729   
## CountryGUI -3.0000 5.4843 -0.547 0.585   
## CountryGHA -2.6811 5.4302 -0.494 0.622   
## CountryBKF 0.4037 5.2700 0.077 0.939   
## CountryZIM 1.7640 5.6433 0.313 0.755   
## CountryZAM -1.6300 8.9228 -0.183 0.855   
## CountrySAF 1.8900 5.7596 0.328 0.743   
## CountryUGA -0.3980 6.0954 -0.065 0.948   
## CountryURT 6.7467 5.9485 1.134 0.259   
## CountrySWA -3.0000 8.9228 -0.336 0.737   
## CountrySEN -2.8993 5.4843 -0.529 0.598   
## CountryZAI -3.0000 8.9228 -0.336 0.737   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.752e-14 7.285e+00 0.000 1.0000   
## CountryMOZ 3.000e+00 8.923e+00 0.336 0.7372   
## CountryMLI 1.067e-01 7.485e+00 0.014 0.9887   
## CountryKEN 1.465e+01 7.583e+00 1.933 0.0553 .  
## CountryETH 6.100e+00 1.030e+01 0.592 0.5548   
## CountryGUI 3.013e-14 7.524e+00 0.000 1.0000   
## CountryGHA 3.189e-01 7.485e+00 0.043 0.9661   
## CountryBKF 3.404e+00 7.370e+00 0.462 0.6449   
## CountryZIM 4.764e+00 7.641e+00 0.623 0.5340   
## CountryZAM 1.370e+00 1.030e+01 0.133 0.8944   
## CountrySAF 4.890e+00 7.727e+00 0.633 0.5279   
## CountryUGA 2.602e+00 7.981e+00 0.326 0.7449   
## CountryURT 9.747e+00 7.869e+00 1.239 0.2176   
## CountrySWA 3.592e-14 1.030e+01 0.000 1.0000   
## CountrySEN 1.007e-01 7.524e+00 0.013 0.9893   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1007 1.8811 0.054 0.95740   
## CountryZAI -0.1007 7.5244 -0.013 0.98934   
## CountryMOZ 2.8993 5.4843 0.529 0.59787   
## CountryMLI 0.0060 2.5470 0.002 0.99812   
## CountryKEN 14.5535 2.8216 5.158 8.31e-07 \*\*\*  
## CountryETH 5.9993 7.5244 0.797 0.42661   
## CountryGUI -0.1007 2.6603 -0.038 0.96987   
## CountryGHA 0.2182 2.5470 0.086 0.93184   
## CountryBKF 3.3031 2.1847 1.512 0.13279   
## CountryZIM 4.6633 2.9743 1.568 0.11915   
## CountryZAM 1.2693 7.5244 0.169 0.86628   
## CountrySAF 4.7893 3.1895 1.502 0.13544   
## CountryUGA 2.5013 3.7622 0.665 0.50722   
## CountryURT 9.6460 3.5192 2.741 0.00692 \*\*   
## CountrySWA -0.1007 7.5244 -0.013 0.98934   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.653e-14 7.285e+00 0.000 1.0000   
## CountrySEN 1.007e-01 7.524e+00 0.013 0.9893   
## CountryZAI -2.192e-14 1.030e+01 0.000 1.0000   
## CountryMOZ 3.000e+00 8.923e+00 0.336 0.7372   
## CountryMLI 1.067e-01 7.485e+00 0.014 0.9887   
## CountryKEN 1.465e+01 7.583e+00 1.933 0.0553 .  
## CountryETH 6.100e+00 1.030e+01 0.592 0.5548   
## CountryGUI -2.485e-14 7.524e+00 0.000 1.0000   
## CountryGHA 3.189e-01 7.485e+00 0.043 0.9661   
## CountryBKF 3.404e+00 7.370e+00 0.462 0.6449   
## CountryZIM 4.764e+00 7.641e+00 0.623 0.5340   
## CountryZAM 1.370e+00 1.030e+01 0.133 0.8944   
## CountrySAF 4.890e+00 7.727e+00 0.633 0.5279   
## CountryUGA 2.602e+00 7.981e+00 0.326 0.7449   
## CountryURT 9.747e+00 7.869e+00 1.239 0.2176   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 9.747 2.974 3.277 0.00132 \*\*  
## CountrySWA -9.747 7.869 -1.239 0.21756   
## CountrySEN -9.646 3.519 -2.741 0.00692 \*\*  
## CountryZAI -9.747 7.869 -1.239 0.21756   
## CountryMOZ -6.747 5.949 -1.134 0.25865   
## CountryMLI -9.640 3.434 -2.807 0.00571 \*\*  
## CountryKEN 4.908 3.643 1.347 0.18007   
## CountryETH -3.647 7.869 -0.463 0.64378   
## CountryGUI -9.747 3.519 -2.770 0.00637 \*\*  
## CountryGHA -9.428 3.434 -2.745 0.00684 \*\*  
## CountryBKF -6.343 3.175 -1.998 0.04766 \*   
## CountryZIM -4.983 3.762 -1.324 0.18751   
## CountryZAM -8.377 7.869 -1.064 0.28893   
## CountrySAF -4.857 3.935 -1.234 0.21912   
## CountryUGA -7.145 4.412 -1.620 0.10757   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.6020 3.2581 0.799 0.42586   
## CountryURT 7.1447 4.4115 1.620 0.10757   
## CountrySWA -2.6020 7.9808 -0.326 0.74488   
## CountrySEN -2.5013 3.7622 -0.665 0.50722   
## CountryZAI -2.6020 7.9808 -0.326 0.74488   
## CountryMOZ 0.3980 6.0954 0.065 0.94803   
## CountryMLI -2.4953 3.6830 -0.678 0.49918   
## CountryKEN 12.0522 3.8780 3.108 0.00228 \*\*  
## CountryETH 3.4980 7.9808 0.438 0.66184   
## CountryGUI -2.6020 3.7622 -0.692 0.49031   
## CountryGHA -2.2831 3.6830 -0.620 0.53632   
## CountryBKF 0.8017 3.4424 0.233 0.81618   
## CountryZIM 2.1620 3.9904 0.542 0.58881   
## CountryZAM -1.2320 7.9808 -0.154 0.87754   
## CountrySAF 2.2880 4.1533 0.551 0.58259   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.890 2.576 1.898 0.05968 .   
## CountryUGA -2.288 4.153 -0.551 0.58259   
## CountryURT 4.857 3.935 1.234 0.21912   
## CountrySWA -4.890 7.727 -0.633 0.52788   
## CountrySEN -4.789 3.189 -1.502 0.13544   
## CountryZAI -4.890 7.727 -0.633 0.52788   
## CountryMOZ -1.890 5.760 -0.328 0.74329   
## CountryMLI -4.783 3.096 -1.545 0.12455   
## CountryKEN 9.764 3.325 2.936 0.00388 \*\*  
## CountryETH 1.210 7.727 0.157 0.87579   
## CountryGUI -4.890 3.189 -1.533 0.12748   
## CountryGHA -4.571 3.096 -1.477 0.14201   
## CountryBKF -1.486 2.805 -0.530 0.59706   
## CountryZIM -0.126 3.456 -0.036 0.97097   
## CountryZAM -3.520 7.727 -0.456 0.64943   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.370 7.285 0.188 0.851   
## CountrySAF 3.520 7.727 0.456 0.649   
## CountryUGA 1.232 7.981 0.154 0.878   
## CountryURT 8.377 7.869 1.064 0.289   
## CountrySWA -1.370 10.303 -0.133 0.894   
## CountrySEN -1.269 7.524 -0.169 0.866   
## CountryZAI -1.370 10.303 -0.133 0.894   
## CountryMOZ 1.630 8.923 0.183 0.855   
## CountryMLI -1.263 7.485 -0.169 0.866   
## CountryKEN 13.284 7.583 1.752 0.082 .  
## CountryETH 4.730 10.303 0.459 0.647   
## CountryGUI -1.370 7.524 -0.182 0.856   
## CountryGHA -1.051 7.485 -0.140 0.889   
## CountryBKF 2.034 7.370 0.276 0.783   
## CountryZIM 3.394 7.641 0.444 0.658   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_Tc) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.594 -3.404 -0.107 0.000 46.596   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.764 2.304 2.068 0.04048 \*   
## CountryZAM -3.394 7.641 -0.444 0.65759   
## CountrySAF 0.126 3.456 0.036 0.97097   
## CountryUGA -2.162 3.990 -0.542 0.58881   
## CountryURT 4.983 3.762 1.324 0.18751   
## CountrySWA -4.764 7.641 -0.623 0.53398   
## CountrySEN -4.663 2.974 -1.568 0.11915   
## CountryZAI -4.764 7.641 -0.623 0.53398   
## CountryMOZ -1.764 5.643 -0.313 0.75506   
## CountryMLI -4.657 2.873 -1.621 0.10729   
## CountryKEN 9.890 3.119 3.170 0.00187 \*\*  
## CountryETH 1.336 7.641 0.175 0.86145   
## CountryGUI -4.764 2.974 -1.602 0.11145   
## CountryGHA -4.445 2.873 -1.547 0.12411   
## CountryBKF -1.360 2.558 -0.532 0.59568   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.07752)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7483.9 on 141 degrees of freedom  
## AIC: 1078.5  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm Tv per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 15.177 2.642 5.744 5.46e-08 \*\*\*  
## CountryZIM -14.621 6.082 -2.404 0.0175 \*   
## CountryZAM -14.497 17.525 -0.827 0.4095   
## CountrySAF -14.274 6.671 -2.140 0.0341 \*   
## CountryUGA -14.751 8.186 -1.802 0.0737 .   
## CountryURT -13.403 7.550 -1.775 0.0780 .   
## CountrySWA -15.177 17.525 -0.866 0.3880   
## CountrySEN 7.216 5.195 1.389 0.1670   
## CountryZAI -12.317 17.525 -0.703 0.4834   
## CountryMOZ -14.177 12.532 -1.131 0.2599   
## CountryMLI -5.407 4.864 -1.112 0.2682   
## CountryKEN -10.357 5.656 -1.831 0.0692 .   
## CountryETH -14.527 17.525 -0.829 0.4086   
## CountryGUI -12.203 5.195 -2.349 0.0202 \*   
## CountryGHA 1.535 4.864 0.316 0.7528   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 16.711 4.084 4.092 7.16e-05 \*\*\*  
## CountryBKF -1.535 4.864 -0.316 0.7528   
## CountryZIM -16.155 6.833 -2.364 0.0194 \*   
## CountryZAM -16.031 17.800 -0.901 0.3693   
## CountrySAF -15.809 7.362 -2.147 0.0335 \*   
## CountryUGA -16.285 8.758 -1.859 0.0651 .   
## CountryURT -14.938 8.167 -1.829 0.0695 .   
## CountrySWA -16.711 17.800 -0.939 0.3494   
## CountrySEN 5.682 6.057 0.938 0.3498   
## CountryZAI -13.851 17.800 -0.778 0.4378   
## CountryMOZ -15.711 12.913 -1.217 0.2258   
## CountryMLI -6.941 5.775 -1.202 0.2314   
## CountryKEN -11.891 6.457 -1.842 0.0676 .   
## CountryETH -16.061 17.800 -0.902 0.3684   
## CountryGUI -13.737 6.057 -2.268 0.0248 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.974 4.473 0.665 0.50725   
## CountryGHA 13.737 6.057 2.268 0.02485 \*   
## CountryBKF 12.203 5.195 2.349 0.02022 \*   
## CountryZIM -2.418 7.073 -0.342 0.73296   
## CountryZAM -2.294 17.893 -0.128 0.89817   
## CountrySAF -2.071 7.585 -0.273 0.78517   
## CountryUGA -2.548 8.947 -0.285 0.77622   
## CountryURT -1.201 8.369 -0.143 0.88613   
## CountrySWA -2.974 17.893 -0.166 0.86823   
## CountrySEN 19.419 6.326 3.070 0.00257 \*\*  
## CountryZAI -0.114 17.893 -0.006 0.99493   
## CountryMOZ -1.974 13.042 -0.151 0.87991   
## CountryMLI 6.796 6.057 1.122 0.26376   
## CountryKEN 1.846 6.710 0.275 0.78363   
## CountryETH -2.324 17.893 -0.130 0.89685   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.6500 17.3252 0.038 0.970  
## CountryGUI 2.3240 17.8934 0.130 0.897  
## CountryGHA 16.0611 17.7999 0.902 0.368  
## CountryBKF 14.5265 17.5255 0.829 0.409  
## CountryZIM -0.0940 18.1708 -0.005 0.996  
## CountryZAM 0.0300 24.5015 0.001 0.999  
## CountrySAF 0.2525 18.3761 0.014 0.989  
## CountryUGA -0.2240 18.9788 -0.012 0.991  
## CountryURT 1.1233 18.7133 0.060 0.952  
## CountrySWA -0.6500 24.5015 -0.027 0.979  
## CountrySEN 21.7427 17.8934 1.215 0.226  
## CountryZAI 2.2100 24.5015 0.090 0.928  
## CountryMOZ 0.3500 21.2189 0.016 0.987  
## CountryMLI 9.1200 17.7999 0.512 0.609  
## CountryKEN 4.1700 18.0326 0.231 0.817  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.820 5.001 0.964 0.33683   
## CountryETH -4.170 18.033 -0.231 0.81746   
## CountryGUI -1.846 6.710 -0.275 0.78363   
## CountryGHA 11.891 6.457 1.842 0.06762 .   
## CountryBKF 10.357 5.656 1.831 0.06922 .   
## CountryZIM -4.264 7.418 -0.575 0.56634   
## CountryZAM -4.140 18.033 -0.230 0.81875   
## CountrySAF -3.918 7.908 -0.495 0.62109   
## CountryUGA -4.394 9.222 -0.476 0.63448   
## CountryURT -3.047 8.663 -0.352 0.72559   
## CountrySWA -4.820 18.033 -0.267 0.78963   
## CountrySEN 17.573 6.710 2.619 0.00979 \*\*  
## CountryZAI -1.960 18.033 -0.109 0.91360   
## CountryMOZ -3.820 13.232 -0.289 0.77324   
## CountryMLI 4.950 6.457 0.767 0.44457   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 9.770 4.084 2.393 0.0181 \*  
## CountryKEN -4.950 6.457 -0.767 0.4446   
## CountryETH -9.120 17.800 -0.512 0.6092   
## CountryGUI -6.796 6.057 -1.122 0.2638   
## CountryGHA 6.941 5.775 1.202 0.2314   
## CountryBKF 5.407 4.864 1.112 0.2682   
## CountryZIM -9.214 6.833 -1.348 0.1797   
## CountryZAM -9.090 17.800 -0.511 0.6104   
## CountrySAF -8.868 7.362 -1.205 0.2304   
## CountryUGA -9.344 8.758 -1.067 0.2879   
## CountryURT -7.997 8.167 -0.979 0.3292   
## CountrySWA -9.770 17.800 -0.549 0.5840   
## CountrySEN 12.623 6.057 2.084 0.0390 \*  
## CountryZAI -6.910 17.800 -0.388 0.6985   
## CountryMOZ -8.770 12.913 -0.679 0.4982   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.0000 12.2507 0.082 0.935  
## CountryMLI 8.7700 12.9134 0.679 0.498  
## CountryKEN 3.8200 13.2323 0.289 0.773  
## CountryETH -0.3500 21.2189 -0.016 0.987  
## CountryGUI 1.9740 13.0419 0.151 0.880  
## CountryGHA 15.7111 12.9134 1.217 0.226  
## CountryBKF 14.1765 12.5324 1.131 0.260  
## CountryZIM -0.4440 13.4200 -0.033 0.974  
## CountryZAM -0.3200 21.2189 -0.015 0.988  
## CountrySAF -0.0975 13.6967 -0.007 0.994  
## CountryUGA -0.5740 14.4953 -0.040 0.968  
## CountryURT 0.7733 14.1459 0.055 0.956  
## CountrySWA -1.0000 21.2189 -0.047 0.962  
## CountrySEN 21.3927 13.0419 1.640 0.103  
## CountryZAI 1.8600 21.2189 0.088 0.930  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.860 17.325 0.165 0.869  
## CountryMOZ -1.860 21.219 -0.088 0.930  
## CountryMLI 6.910 17.800 0.388 0.698  
## CountryKEN 1.960 18.033 0.109 0.914  
## CountryETH -2.210 24.502 -0.090 0.928  
## CountryGUI 0.114 17.893 0.006 0.995  
## CountryGHA 13.851 17.800 0.778 0.438  
## CountryBKF 12.316 17.526 0.703 0.483  
## CountryZIM -2.304 18.171 -0.127 0.899  
## CountryZAM -2.180 24.502 -0.089 0.929  
## CountrySAF -1.958 18.376 -0.107 0.915  
## CountryUGA -2.434 18.979 -0.128 0.898  
## CountryURT -1.087 18.713 -0.058 0.954  
## CountrySWA -2.860 24.502 -0.117 0.907  
## CountrySEN 19.533 17.893 1.092 0.277  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 22.393 4.473 5.006 1.63e-06 \*\*\*  
## CountryZAI -19.533 17.893 -1.092 0.27686   
## CountryMOZ -21.393 13.042 -1.640 0.10317   
## CountryMLI -12.623 6.057 -2.084 0.03896 \*   
## CountryKEN -17.573 6.710 -2.619 0.00979 \*\*   
## CountryETH -21.743 17.893 -1.215 0.22635   
## CountryGUI -19.419 6.326 -3.070 0.00257 \*\*   
## CountryGHA -5.682 6.057 -0.938 0.34984   
## CountryBKF -7.216 5.195 -1.389 0.16703   
## CountryZIM -21.837 7.073 -3.087 0.00243 \*\*   
## CountryZAM -21.713 17.893 -1.213 0.22699   
## CountrySAF -21.490 7.585 -2.833 0.00528 \*\*   
## CountryUGA -21.967 8.947 -2.455 0.01529 \*   
## CountryURT -20.619 8.369 -2.464 0.01495 \*   
## CountrySWA -22.393 17.893 -1.251 0.21284   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.314e-13 1.733e+01 0.000 1.000  
## CountrySEN 2.239e+01 1.789e+01 1.251 0.213  
## CountryZAI 2.860e+00 2.450e+01 0.117 0.907  
## CountryMOZ 1.000e+00 2.122e+01 0.047 0.962  
## CountryMLI 9.770e+00 1.780e+01 0.549 0.584  
## CountryKEN 4.820e+00 1.803e+01 0.267 0.790  
## CountryETH 6.500e-01 2.450e+01 0.027 0.979  
## CountryGUI 2.974e+00 1.789e+01 0.166 0.868  
## CountryGHA 1.671e+01 1.780e+01 0.939 0.349  
## CountryBKF 1.518e+01 1.753e+01 0.866 0.388  
## CountryZIM 5.560e-01 1.817e+01 0.031 0.976  
## CountryZAM 6.800e-01 2.450e+01 0.028 0.978  
## CountrySAF 9.025e-01 1.838e+01 0.049 0.961  
## CountryUGA 4.260e-01 1.898e+01 0.022 0.982  
## CountryURT 1.773e+00 1.871e+01 0.095 0.925  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.7733 7.0730 0.251 0.8024   
## CountrySWA -1.7733 18.7133 -0.095 0.9246   
## CountrySEN 20.6193 8.3689 2.464 0.0149 \*  
## CountryZAI 1.0867 18.7133 0.058 0.9538   
## CountryMOZ -0.7733 14.1459 -0.055 0.9565   
## CountryMLI 7.9967 8.1672 0.979 0.3292   
## CountryKEN 3.0467 8.6626 0.352 0.7256   
## CountryETH -1.1233 18.7133 -0.060 0.9522   
## CountryGUI 1.2007 8.3689 0.143 0.8861   
## CountryGHA 14.9378 8.1672 1.829 0.0695 .  
## CountryBKF 13.4032 7.5503 1.775 0.0780 .  
## CountryZIM -1.2173 8.9467 -0.136 0.8920   
## CountryZAM -1.0933 18.7133 -0.058 0.9535   
## CountrySAF -0.8708 9.3567 -0.093 0.9260   
## CountryUGA -1.3473 10.4909 -0.128 0.8980   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.4260 7.7481 0.055 0.9562   
## CountryURT 1.3473 10.4909 0.128 0.8980   
## CountrySWA -0.4260 18.9788 -0.022 0.9821   
## CountrySEN 21.9667 8.9467 2.455 0.0153 \*  
## CountryZAI 2.4340 18.9788 0.128 0.8981   
## CountryMOZ 0.5740 14.4953 0.040 0.9685   
## CountryMLI 9.3440 8.7583 1.067 0.2879   
## CountryKEN 4.3940 9.2220 0.476 0.6345   
## CountryETH 0.2240 18.9788 0.012 0.9906   
## CountryGUI 2.5480 8.9467 0.285 0.7762   
## CountryGHA 16.2851 8.7583 1.859 0.0651 .  
## CountryBKF 14.7505 8.1861 1.802 0.0737 .  
## CountryZIM 0.1300 9.4894 0.014 0.9891   
## CountryZAM 0.2540 18.9788 0.013 0.9893   
## CountrySAF 0.4765 9.8769 0.048 0.9616   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.9025 6.1254 0.147 0.88308   
## CountryUGA -0.4765 9.8769 -0.048 0.96159   
## CountryURT 0.8708 9.3567 0.093 0.92598   
## CountrySWA -0.9025 18.3761 -0.049 0.96090   
## CountrySEN 21.4902 7.5849 2.833 0.00528 \*\*  
## CountryZAI 1.9575 18.3761 0.107 0.91532   
## CountryMOZ 0.0975 13.6967 0.007 0.99433   
## CountryMLI 8.8675 7.3618 1.205 0.23040   
## CountryKEN 3.9175 7.9078 0.495 0.62109   
## CountryETH -0.2525 18.3761 -0.014 0.98906   
## CountryGUI 2.0715 7.5849 0.273 0.78517   
## CountryGHA 15.8086 7.3618 2.147 0.03347 \*   
## CountryBKF 14.2740 6.6709 2.140 0.03410 \*   
## CountryZIM -0.3465 8.2180 -0.042 0.96643   
## CountryZAM -0.2225 18.3761 -0.012 0.99036   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.6800 17.3252 0.039 0.969  
## CountrySAF 0.2225 18.3761 0.012 0.990  
## CountryUGA -0.2540 18.9788 -0.013 0.989  
## CountryURT 1.0933 18.7133 0.058 0.953  
## CountrySWA -0.6800 24.5015 -0.028 0.978  
## CountrySEN 21.7127 17.8934 1.213 0.227  
## CountryZAI 2.1800 24.5015 0.089 0.929  
## CountryMOZ 0.3200 21.2189 0.015 0.988  
## CountryMLI 9.0900 17.7999 0.511 0.610  
## CountryKEN 4.1400 18.0326 0.230 0.819  
## CountryETH -0.0300 24.5015 -0.001 0.999  
## CountryGUI 2.2940 17.8934 0.128 0.898  
## CountryGHA 16.0311 17.7999 0.901 0.369  
## CountryBKF 14.4965 17.5255 0.827 0.410  
## CountryZIM -0.1240 18.1708 -0.007 0.995  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_Tv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -9.770 -1.427 3.072 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.5560 5.4787 0.101 0.91931   
## CountryZAM 0.1240 18.1708 0.007 0.99456   
## CountrySAF 0.3465 8.2180 0.042 0.96643   
## CountryUGA -0.1300 9.4894 -0.014 0.98909   
## CountryURT 1.2173 8.9467 0.136 0.89196   
## CountrySWA -0.5560 18.1708 -0.031 0.97563   
## CountrySEN 21.8367 7.0730 3.087 0.00243 \*\*  
## CountryZAI 2.3040 18.1708 0.127 0.89928   
## CountryMOZ 0.4440 13.4200 0.033 0.97365   
## CountryMLI 9.2140 6.8331 1.348 0.17968   
## CountryKEN 4.2640 7.4182 0.575 0.56634   
## CountryETH 0.0940 18.1708 0.005 0.99588   
## CountryGUI 2.4180 7.0730 0.342 0.73296   
## CountryGHA 16.1551 6.8331 2.364 0.01943 \*   
## CountryBKF 14.6205 6.0825 2.404 0.01753 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 300.1614)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 42323 on 141 degrees of freedom  
## AIC: 1348.8  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm Tz per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.0077 1.9654 1.530 0.128   
## CountryZIM -1.9827 4.5248 -0.438 0.662   
## CountryZAM -2.3277 13.0372 -0.179 0.859   
## CountrySAF 0.9461 4.9625 0.191 0.849   
## CountryUGA -1.9957 6.0897 -0.328 0.744   
## CountryURT 2.0323 5.6167 0.362 0.718   
## CountrySWA -3.0077 13.0372 -0.231 0.818   
## CountrySEN 1.1203 3.8648 0.290 0.772   
## CountryZAI -3.0077 13.0372 -0.231 0.818   
## CountryMOZ -3.0077 9.3229 -0.323 0.747   
## CountryMLI -2.4571 3.6181 -0.679 0.498   
## CountryKEN -2.5827 4.2077 -0.614 0.540   
## CountryETH -1.9177 13.0372 -0.147 0.883   
## CountryGUI -3.0077 3.8648 -0.778 0.438   
## CountryGHA 31.9901 3.6181 8.842 3.46e-15 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 34.998 3.038 11.521 < 2e-16 \*\*\*  
## CountryBKF -31.990 3.618 -8.842 3.46e-15 \*\*\*  
## CountryZIM -33.973 5.083 -6.683 5.02e-10 \*\*\*  
## CountryZAM -34.318 13.241 -2.592 0.010555 \*   
## CountrySAF -31.044 5.476 -5.669 7.83e-08 \*\*\*  
## CountryUGA -33.986 6.515 -5.216 6.38e-07 \*\*\*  
## CountryURT -29.958 6.076 -4.931 2.27e-06 \*\*\*  
## CountrySWA -34.998 13.241 -2.643 0.009145 \*\*   
## CountrySEN -30.870 4.506 -6.851 2.09e-10 \*\*\*  
## CountryZAI -34.998 13.241 -2.643 0.009145 \*\*   
## CountryMOZ -34.998 9.606 -3.643 0.000378 \*\*\*  
## CountryMLI -34.447 4.296 -8.018 3.71e-13 \*\*\*  
## CountryKEN -34.573 4.803 -7.198 3.33e-11 \*\*\*  
## CountryETH -33.908 13.241 -2.561 0.011496 \*   
## CountryGUI -34.998 4.506 -7.767 1.50e-12 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.000e+00 3.328e+00 0.000 1.000   
## CountryGHA 3.500e+01 4.506e+00 7.767 1.5e-12 \*\*\*  
## CountryBKF 3.008e+00 3.865e+00 0.778 0.438   
## CountryZIM 1.025e+00 5.262e+00 0.195 0.846   
## CountryZAM 6.800e-01 1.331e+01 0.051 0.959   
## CountrySAF 3.954e+00 5.642e+00 0.701 0.485   
## CountryUGA 1.012e+00 6.655e+00 0.152 0.879   
## CountryURT 5.040e+00 6.226e+00 0.810 0.420   
## CountrySWA -8.168e-15 1.331e+01 0.000 1.000   
## CountrySEN 4.128e+00 4.706e+00 0.877 0.382   
## CountryZAI 3.757e-15 1.331e+01 0.000 1.000   
## CountryMOZ 6.415e-16 9.702e+00 0.000 1.000   
## CountryMLI 5.506e-01 4.506e+00 0.122 0.903   
## CountryKEN 4.250e-01 4.992e+00 0.085 0.932   
## CountryETH 1.090e+00 1.331e+01 0.082 0.935   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.0900 12.8882 0.085 0.9327   
## CountryGUI -1.0900 13.3109 -0.082 0.9349   
## CountryGHA 33.9078 13.2414 2.561 0.0115 \*  
## CountryBKF 1.9177 13.0372 0.147 0.8833   
## CountryZIM -0.0650 13.5173 -0.005 0.9962   
## CountryZAM -0.4100 18.2267 -0.022 0.9821   
## CountrySAF 2.8638 13.6700 0.209 0.8344   
## CountryUGA -0.0780 14.1183 -0.006 0.9956   
## CountryURT 3.9500 13.9208 0.284 0.7770   
## CountrySWA -1.0900 18.2267 -0.060 0.9524   
## CountrySEN 3.0380 13.3109 0.228 0.8198   
## CountryZAI -1.0900 18.2267 -0.060 0.9524   
## CountryMOZ -1.0900 15.7848 -0.069 0.9450   
## CountryMLI -0.5394 13.2414 -0.041 0.9676   
## CountryKEN -0.6650 13.4145 -0.050 0.9605   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.4250 3.7205 0.114 0.909   
## CountryETH 0.6650 13.4145 0.050 0.961   
## CountryGUI -0.4250 4.9916 -0.085 0.932   
## CountryGHA 34.5728 4.8031 7.198 3.33e-11 \*\*\*  
## CountryBKF 2.5827 4.2077 0.614 0.540   
## CountryZIM 0.6000 5.5184 0.109 0.914   
## CountryZAM 0.2550 13.4145 0.019 0.985   
## CountrySAF 3.5287 5.8826 0.600 0.550   
## CountryUGA 0.5870 6.8603 0.086 0.932   
## CountryURT 4.6150 6.4441 0.716 0.475   
## CountrySWA -0.4250 13.4145 -0.032 0.975   
## CountrySEN 3.7030 4.9916 0.742 0.459   
## CountryZAI -0.4250 13.4145 -0.032 0.975   
## CountryMOZ -0.4250 9.8435 -0.043 0.966   
## CountryMLI 0.1256 4.8031 0.026 0.979   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.5506 3.0378 0.181 0.856   
## CountryKEN -0.1256 4.8031 -0.026 0.979   
## CountryETH 0.5394 13.2414 0.041 0.968   
## CountryGUI -0.5506 4.5058 -0.122 0.903   
## CountryGHA 34.4472 4.2961 8.018 3.71e-13 \*\*\*  
## CountryBKF 2.4571 3.6181 0.679 0.498   
## CountryZIM 0.4744 5.0832 0.093 0.926   
## CountryZAM 0.1294 13.2414 0.010 0.992   
## CountrySAF 3.4032 5.4764 0.621 0.535   
## CountryUGA 0.4614 6.5153 0.071 0.944   
## CountryURT 4.4894 6.0756 0.739 0.461   
## CountrySWA -0.5506 13.2414 -0.042 0.967   
## CountrySEN 3.5774 4.5058 0.794 0.429   
## CountryZAI -0.5506 13.2414 -0.042 0.967   
## CountryMOZ -0.5506 9.6063 -0.057 0.954   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.176e-14 9.113e+00 0.000 1.000000   
## CountryMLI 5.506e-01 9.606e+00 0.057 0.954378   
## CountryKEN 4.250e-01 9.844e+00 0.043 0.965623   
## CountryETH 1.090e+00 1.578e+01 0.069 0.945044   
## CountryGUI -3.618e-14 9.702e+00 0.000 1.000000   
## CountryGHA 3.500e+01 9.606e+00 3.643 0.000378 \*\*\*  
## CountryBKF 3.008e+00 9.323e+00 0.323 0.747466   
## CountryZIM 1.025e+00 9.983e+00 0.103 0.918368   
## CountryZAM 6.800e-01 1.578e+01 0.043 0.965699   
## CountrySAF 3.954e+00 1.019e+01 0.388 0.698571   
## CountryUGA 1.012e+00 1.078e+01 0.094 0.925361   
## CountryURT 5.040e+00 1.052e+01 0.479 0.632721   
## CountrySWA -2.555e-14 1.578e+01 0.000 1.000000   
## CountrySEN 4.128e+00 9.702e+00 0.425 0.671132   
## CountryZAI -4.045e-14 1.578e+01 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 9.204e-14 1.289e+01 0.000 1.00000   
## CountryMOZ -9.421e-14 1.578e+01 0.000 1.00000   
## CountryMLI 5.506e-01 1.324e+01 0.042 0.96689   
## CountryKEN 4.250e-01 1.341e+01 0.032 0.97477   
## CountryETH 1.090e+00 1.823e+01 0.060 0.95240   
## CountryGUI -8.908e-14 1.331e+01 0.000 1.00000   
## CountryGHA 3.500e+01 1.324e+01 2.643 0.00915 \*\*  
## CountryBKF 3.008e+00 1.304e+01 0.231 0.81788   
## CountryZIM 1.025e+00 1.352e+01 0.076 0.93966   
## CountryZAM 6.800e-01 1.823e+01 0.037 0.97029   
## CountrySAF 3.954e+00 1.367e+01 0.289 0.77283   
## CountryUGA 1.012e+00 1.412e+01 0.072 0.94296   
## CountryURT 5.040e+00 1.392e+01 0.362 0.71786   
## CountrySWA -9.613e-14 1.823e+01 0.000 1.00000   
## CountrySEN 4.128e+00 1.331e+01 0.310 0.75693   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.1280 3.3277 1.240 0.217   
## CountryZAI -4.1280 13.3109 -0.310 0.757   
## CountryMOZ -4.1280 9.7019 -0.425 0.671   
## CountryMLI -3.5774 4.5058 -0.794 0.429   
## CountryKEN -3.7030 4.9916 -0.742 0.459   
## CountryETH -3.0380 13.3109 -0.228 0.820   
## CountryGUI -4.1280 4.7061 -0.877 0.382   
## CountryGHA 30.8698 4.5058 6.851 2.09e-10 \*\*\*  
## CountryBKF -1.1203 3.8648 -0.290 0.772   
## CountryZIM -3.1030 5.2616 -0.590 0.556   
## CountryZAM -3.4480 13.3109 -0.259 0.796   
## CountrySAF -0.1742 5.6424 -0.031 0.975   
## CountryUGA -3.1160 6.6554 -0.468 0.640   
## CountryURT 0.9120 6.2256 0.146 0.884   
## CountrySWA -4.1280 13.3109 -0.310 0.757   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.756e-15 1.289e+01 0.000 1.00000   
## CountrySEN 4.128e+00 1.331e+01 0.310 0.75693   
## CountryZAI -6.944e-15 1.823e+01 0.000 1.00000   
## CountryMOZ -3.519e-15 1.578e+01 0.000 1.00000   
## CountryMLI 5.506e-01 1.324e+01 0.042 0.96689   
## CountryKEN 4.250e-01 1.341e+01 0.032 0.97477   
## CountryETH 1.090e+00 1.823e+01 0.060 0.95240   
## CountryGUI -1.781e-14 1.331e+01 0.000 1.00000   
## CountryGHA 3.500e+01 1.324e+01 2.643 0.00915 \*\*  
## CountryBKF 3.008e+00 1.304e+01 0.231 0.81788   
## CountryZIM 1.025e+00 1.352e+01 0.076 0.93966   
## CountryZAM 6.800e-01 1.823e+01 0.037 0.97029   
## CountrySAF 3.954e+00 1.367e+01 0.289 0.77283   
## CountryUGA 1.012e+00 1.412e+01 0.072 0.94296   
## CountryURT 5.040e+00 1.392e+01 0.362 0.71786   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.040 5.262 0.958 0.340   
## CountrySWA -5.040 13.921 -0.362 0.718   
## CountrySEN -0.912 6.226 -0.146 0.884   
## CountryZAI -5.040 13.921 -0.362 0.718   
## CountryMOZ -5.040 10.523 -0.479 0.633   
## CountryMLI -4.489 6.076 -0.739 0.461   
## CountryKEN -4.615 6.444 -0.716 0.475   
## CountryETH -3.950 13.921 -0.284 0.777   
## CountryGUI -5.040 6.226 -0.810 0.420   
## CountryGHA 29.958 6.076 4.931 2.27e-06 \*\*\*  
## CountryBKF -2.032 5.617 -0.362 0.718   
## CountryZIM -4.015 6.655 -0.603 0.547   
## CountryZAM -4.360 13.921 -0.313 0.755   
## CountrySAF -1.086 6.960 -0.156 0.876   
## CountryUGA -4.028 7.804 -0.516 0.607   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.0120 5.7638 0.176 0.861   
## CountryURT 4.0280 7.8042 0.516 0.607   
## CountrySWA -1.0120 14.1183 -0.072 0.943   
## CountrySEN 3.1160 6.6554 0.468 0.640   
## CountryZAI -1.0120 14.1183 -0.072 0.943   
## CountryMOZ -1.0120 10.7830 -0.094 0.925   
## CountryMLI -0.4614 6.5153 -0.071 0.944   
## CountryKEN -0.5870 6.8603 -0.086 0.932   
## CountryETH 0.0780 14.1183 0.006 0.996   
## CountryGUI -1.0120 6.6554 -0.152 0.879   
## CountryGHA 33.9858 6.5153 5.216 6.38e-07 \*\*\*  
## CountryBKF 1.9957 6.0897 0.328 0.744   
## CountryZIM 0.0130 7.0591 0.002 0.999   
## CountryZAM -0.3320 14.1183 -0.024 0.981   
## CountrySAF 2.9417 7.3474 0.400 0.689   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.9538 4.5567 0.868 0.387   
## CountryUGA -2.9417 7.3474 -0.400 0.689   
## CountryURT 1.0862 6.9604 0.156 0.876   
## CountrySWA -3.9538 13.6700 -0.289 0.773   
## CountrySEN 0.1743 5.6424 0.031 0.975   
## CountryZAI -3.9537 13.6700 -0.289 0.773   
## CountryMOZ -3.9537 10.1890 -0.388 0.699   
## CountryMLI -3.4032 5.4764 -0.621 0.535   
## CountryKEN -3.5288 5.8826 -0.600 0.550   
## CountryETH -2.8637 13.6700 -0.209 0.834   
## CountryGUI -3.9537 5.6424 -0.701 0.485   
## CountryGHA 31.0440 5.4764 5.669 7.83e-08 \*\*\*  
## CountryBKF -0.9461 4.9625 -0.191 0.849   
## CountryZIM -2.9288 6.1134 -0.479 0.633   
## CountryZAM -3.2737 13.6700 -0.239 0.811   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.6800 12.8882 0.053 0.9580   
## CountrySAF 3.2737 13.6700 0.239 0.8111   
## CountryUGA 0.3320 14.1183 0.024 0.9813   
## CountryURT 4.3600 13.9208 0.313 0.7546   
## CountrySWA -0.6800 18.2267 -0.037 0.9703   
## CountrySEN 3.4480 13.3109 0.259 0.7960   
## CountryZAI -0.6800 18.2267 -0.037 0.9703   
## CountryMOZ -0.6800 15.7847 -0.043 0.9657   
## CountryMLI -0.1294 13.2414 -0.010 0.9922   
## CountryKEN -0.2550 13.4145 -0.019 0.9849   
## CountryETH 0.4100 18.2267 0.022 0.9821   
## CountryGUI -0.6800 13.3109 -0.051 0.9593   
## CountryGHA 34.3178 13.2414 2.592 0.0106 \*  
## CountryBKF 2.3277 13.0372 0.179 0.8586   
## CountryZIM 0.3450 13.5173 0.026 0.9797   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_Tz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -3.008 -1.012 0.000 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.0250 4.0756 0.251 0.802   
## CountryZAM -0.3450 13.5173 -0.026 0.980   
## CountrySAF 2.9287 6.1134 0.479 0.633   
## CountryUGA -0.0130 7.0591 -0.002 0.999   
## CountryURT 4.0150 6.6554 0.603 0.547   
## CountrySWA -1.0250 13.5173 -0.076 0.940   
## CountrySEN 3.1030 5.2616 0.590 0.556   
## CountryZAI -1.0250 13.5173 -0.076 0.940   
## CountryMOZ -1.0250 9.9832 -0.103 0.918   
## CountryMLI -0.4744 5.0832 -0.093 0.926   
## CountryKEN -0.6000 5.5184 -0.109 0.914   
## CountryETH 0.0650 13.5173 0.005 0.996   
## CountryGUI -1.0250 5.2616 -0.195 0.846   
## CountryGHA 33.9728 5.0832 6.683 5.02e-10 \*\*\*  
## CountryBKF 1.9827 4.5248 0.438 0.662   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 166.1055)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 23421 on 141 degrees of freedom  
## AIC: 1256.5  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm Tsg per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.2798 1.6499 2.594 0.01049 \*   
## CountryZIM 12.0632 3.7984 3.176 0.00184 \*\*  
## CountryZAM 30.6502 10.9445 2.801 0.00582 \*\*  
## CountrySAF 6.4140 4.1659 1.540 0.12589   
## CountryUGA 0.7482 5.1122 0.146 0.88384   
## CountryURT 2.5236 4.7151 0.535 0.59335   
## CountrySWA -4.2798 10.9445 -0.391 0.69635   
## CountrySEN -3.6944 3.2444 -1.139 0.25676   
## CountryZAI -4.2798 10.9445 -0.391 0.69635   
## CountryMOZ -1.2798 7.8264 -0.164 0.87034   
## CountryMLI -4.2798 3.0374 -1.409 0.16102   
## CountryKEN 10.3436 3.5323 2.928 0.00398 \*\*  
## CountryETH 6.1802 10.9445 0.565 0.57318   
## CountryGUI -4.2798 3.2444 -1.319 0.18927   
## CountryGHA -4.2798 3.0374 -1.409 0.16102   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -7.822e-15 2.550e+00 0.000 1.000000   
## CountryBKF 4.280e+00 3.037e+00 1.409 0.161025   
## CountryZIM 1.634e+01 4.267e+00 3.830 0.000192 \*\*\*  
## CountryZAM 3.493e+01 1.112e+01 3.142 0.002043 \*\*   
## CountrySAF 1.069e+01 4.597e+00 2.326 0.021441 \*   
## CountryUGA 5.028e+00 5.469e+00 0.919 0.359516   
## CountryURT 6.803e+00 5.100e+00 1.334 0.184385   
## CountrySWA 1.775e-14 1.112e+01 0.000 1.000000   
## CountrySEN 5.853e-01 3.782e+00 0.155 0.877241   
## CountryZAI -2.223e-15 1.112e+01 0.000 1.000000   
## CountryMOZ 3.000e+00 8.064e+00 0.372 0.710444   
## CountryMLI 9.383e-15 3.606e+00 0.000 1.000000   
## CountryKEN 1.462e+01 4.032e+00 3.627 0.000400 \*\*\*  
## CountryETH 1.046e+01 1.112e+01 0.941 0.348315   
## CountryGUI -1.164e-16 3.782e+00 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.634e-14 2.794e+00 0.000 1.000000   
## CountryGHA -1.959e-14 3.782e+00 0.000 1.000000   
## CountryBKF 4.280e+00 3.244e+00 1.319 0.189268   
## CountryZIM 1.634e+01 4.417e+00 3.700 0.000308 \*\*\*  
## CountryZAM 3.493e+01 1.117e+01 3.126 0.002153 \*\*   
## CountrySAF 1.069e+01 4.737e+00 2.258 0.025505 \*   
## CountryUGA 5.028e+00 5.587e+00 0.900 0.369692   
## CountryURT 6.803e+00 5.226e+00 1.302 0.195121   
## CountrySWA 1.018e-14 1.117e+01 0.000 1.000000   
## CountrySEN 5.853e-01 3.951e+00 0.148 0.882428   
## CountryZAI 6.324e-15 1.117e+01 0.000 1.000000   
## CountryMOZ 3.000e+00 8.145e+00 0.368 0.713168   
## CountryMLI -1.717e-14 3.782e+00 0.000 1.000000   
## CountryKEN 1.462e+01 4.190e+00 3.490 0.000645 \*\*\*  
## CountryETH 1.046e+01 1.117e+01 0.936 0.350830   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 10.4600 10.8194 0.967 0.335  
## CountryGUI -10.4600 11.1742 -0.936 0.351  
## CountryGHA -10.4600 11.1159 -0.941 0.348  
## CountryBKF -6.1802 10.9445 -0.565 0.573  
## CountryZIM 5.8830 11.3475 0.518 0.605  
## CountryZAM 24.4700 15.3009 1.599 0.112  
## CountrySAF 0.2337 11.4757 0.020 0.984  
## CountryUGA -5.4320 11.8520 -0.458 0.647  
## CountryURT -3.6567 11.6863 -0.313 0.755  
## CountrySWA -10.4600 15.3009 -0.684 0.495  
## CountrySEN -9.8747 11.1742 -0.884 0.378  
## CountryZAI -10.4600 15.3009 -0.684 0.495  
## CountryMOZ -7.4600 13.2510 -0.563 0.574  
## CountryMLI -10.4600 11.1159 -0.941 0.348  
## CountryKEN 4.1633 11.2612 0.370 0.712  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 14.623 3.123 4.682 6.6e-06 \*\*\*  
## CountryETH -4.163 11.261 -0.370 0.712155   
## CountryGUI -14.623 4.190 -3.490 0.000645 \*\*\*  
## CountryGHA -14.623 4.032 -3.627 0.000400 \*\*\*  
## CountryBKF -10.344 3.532 -2.928 0.003976 \*\*   
## CountryZIM 1.720 4.633 0.371 0.711037   
## CountryZAM 20.307 11.261 1.803 0.073485 .   
## CountrySAF -3.930 4.938 -0.796 0.427528   
## CountryUGA -9.595 5.759 -1.666 0.097908 .   
## CountryURT -7.820 5.410 -1.446 0.150521   
## CountrySWA -14.623 11.261 -1.299 0.196214   
## CountrySEN -14.038 4.190 -3.350 0.001037 \*\*   
## CountryZAI -14.623 11.261 -1.299 0.196214   
## CountryMOZ -11.623 8.263 -1.407 0.161747   
## CountryMLI -14.623 4.032 -3.627 0.000400 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.365e-14 2.550e+00 0.000 1.000000   
## CountryKEN 1.462e+01 4.032e+00 3.627 0.000400 \*\*\*  
## CountryETH 1.046e+01 1.112e+01 0.941 0.348315   
## CountryGUI -3.449e-15 3.782e+00 0.000 1.000000   
## CountryGHA -3.839e-15 3.606e+00 0.000 1.000000   
## CountryBKF 4.280e+00 3.037e+00 1.409 0.161025   
## CountryZIM 1.634e+01 4.267e+00 3.830 0.000192 \*\*\*  
## CountryZAM 3.493e+01 1.112e+01 3.142 0.002043 \*\*   
## CountrySAF 1.069e+01 4.597e+00 2.326 0.021441 \*   
## CountryUGA 5.028e+00 5.469e+00 0.919 0.359516   
## CountryURT 6.803e+00 5.100e+00 1.334 0.184385   
## CountrySWA -2.645e-15 1.112e+01 0.000 1.000000   
## CountrySEN 5.853e-01 3.782e+00 0.155 0.877241   
## CountryZAI 3.185e-15 1.112e+01 0.000 1.000000   
## CountryMOZ 3.000e+00 8.064e+00 0.372 0.710444   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.000 7.650 0.392 0.6956   
## CountryMLI -3.000 8.064 -0.372 0.7104   
## CountryKEN 11.623 8.263 1.407 0.1617   
## CountryETH 7.460 13.251 0.563 0.5743   
## CountryGUI -3.000 8.145 -0.368 0.7132   
## CountryGHA -3.000 8.064 -0.372 0.7104   
## CountryBKF 1.280 7.826 0.164 0.8703   
## CountryZIM 13.343 8.381 1.592 0.1136   
## CountryZAM 31.930 13.251 2.410 0.0173 \*  
## CountrySAF 7.694 8.553 0.899 0.3699   
## CountryUGA 2.028 9.052 0.224 0.8231   
## CountryURT 3.803 8.834 0.431 0.6675   
## CountrySWA -3.000 13.251 -0.226 0.8212   
## CountrySEN -2.415 8.145 -0.296 0.7673   
## CountryZAI -3.000 13.251 -0.226 0.8212   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -4.883e-14 1.082e+01 0.000 1.0000   
## CountryMOZ 3.000e+00 1.325e+01 0.226 0.8212   
## CountryMLI 4.522e-14 1.112e+01 0.000 1.0000   
## CountryKEN 1.462e+01 1.126e+01 1.299 0.1962   
## CountryETH 1.046e+01 1.530e+01 0.684 0.4953   
## CountryGUI 4.630e-14 1.117e+01 0.000 1.0000   
## CountryGHA 3.256e-14 1.112e+01 0.000 1.0000   
## CountryBKF 4.280e+00 1.094e+01 0.391 0.6964   
## CountryZIM 1.634e+01 1.135e+01 1.440 0.1520   
## CountryZAM 3.493e+01 1.530e+01 2.283 0.0239 \*  
## CountrySAF 1.069e+01 1.148e+01 0.932 0.3530   
## CountryUGA 5.028e+00 1.185e+01 0.424 0.6720   
## CountryURT 6.803e+00 1.169e+01 0.582 0.5614   
## CountrySWA 6.981e-14 1.530e+01 0.000 1.0000   
## CountrySEN 5.853e-01 1.117e+01 0.052 0.9583   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.5853 2.7936 0.210 0.834337   
## CountryZAI -0.5853 11.1742 -0.052 0.958298   
## CountryMOZ 2.4147 8.1445 0.296 0.767302   
## CountryMLI -0.5853 3.7825 -0.155 0.877241   
## CountryKEN 14.0380 4.1903 3.350 0.001037 \*\*   
## CountryETH 9.8747 11.1742 0.884 0.378361   
## CountryGUI -0.5853 3.9507 -0.148 0.882428   
## CountryGHA -0.5853 3.7825 -0.155 0.877241   
## CountryBKF 3.6944 3.2444 1.139 0.256757   
## CountryZIM 15.7577 4.4170 3.568 0.000493 \*\*\*  
## CountryZAM 34.3447 11.1742 3.074 0.002540 \*\*   
## CountrySAF 10.1084 4.7367 2.134 0.034568 \*   
## CountryUGA 4.4427 5.5871 0.795 0.427854   
## CountryURT 6.2180 5.2263 1.190 0.236140   
## CountrySWA -0.5853 11.1742 -0.052 0.958298   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.065e-13 1.082e+01 0.000 1.0000   
## CountrySEN 5.853e-01 1.117e+01 0.052 0.9583   
## CountryZAI -9.969e-14 1.530e+01 0.000 1.0000   
## CountryMOZ 3.000e+00 1.325e+01 0.226 0.8212   
## CountryMLI -1.289e-13 1.112e+01 0.000 1.0000   
## CountryKEN 1.462e+01 1.126e+01 1.299 0.1962   
## CountryETH 1.046e+01 1.530e+01 0.684 0.4953   
## CountryGUI -2.022e-13 1.117e+01 0.000 1.0000   
## CountryGHA -9.150e-14 1.112e+01 0.000 1.0000   
## CountryBKF 4.280e+00 1.094e+01 0.391 0.6964   
## CountryZIM 1.634e+01 1.135e+01 1.440 0.1520   
## CountryZAM 3.493e+01 1.530e+01 2.283 0.0239 \*  
## CountrySAF 1.069e+01 1.148e+01 0.932 0.3530   
## CountryUGA 5.028e+00 1.185e+01 0.424 0.6720   
## CountryURT 6.803e+00 1.169e+01 0.582 0.5614   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.803 4.417 1.540 0.1257   
## CountrySWA -6.803 11.686 -0.582 0.5614   
## CountrySEN -6.218 5.226 -1.190 0.2361   
## CountryZAI -6.803 11.686 -0.582 0.5614   
## CountryMOZ -3.803 8.834 -0.431 0.6675   
## CountryMLI -6.803 5.100 -1.334 0.1844   
## CountryKEN 7.820 5.410 1.446 0.1505   
## CountryETH 3.657 11.686 0.313 0.7548   
## CountryGUI -6.803 5.226 -1.302 0.1951   
## CountryGHA -6.803 5.100 -1.334 0.1844   
## CountryBKF -2.524 4.715 -0.535 0.5933   
## CountryZIM 9.540 5.587 1.707 0.0899 .  
## CountryZAM 28.127 11.686 2.407 0.0174 \*  
## CountrySAF 3.890 5.843 0.666 0.5066   
## CountryUGA -1.775 6.551 -0.271 0.7868   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.0280 4.8386 1.039 0.3005   
## CountryURT 1.7753 6.5515 0.271 0.7868   
## CountrySWA -5.0280 11.8520 -0.424 0.6720   
## CountrySEN -4.4427 5.5871 -0.795 0.4279   
## CountryZAI -5.0280 11.8520 -0.424 0.6720   
## CountryMOZ -2.0280 9.0521 -0.224 0.8231   
## CountryMLI -5.0280 5.4695 -0.919 0.3595   
## CountryKEN 9.5953 5.7591 1.666 0.0979 .  
## CountryETH 5.4320 11.8520 0.458 0.6474   
## CountryGUI -5.0280 5.5871 -0.900 0.3697   
## CountryGHA -5.0280 5.4695 -0.919 0.3595   
## CountryBKF -0.7482 5.1122 -0.146 0.8838   
## CountryZIM 11.3150 5.9260 1.909 0.0582 .  
## CountryZAM 29.9020 11.8520 2.523 0.0127 \*  
## CountrySAF 5.6658 6.1680 0.919 0.3599   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 10.6938 3.8252 2.796 0.0059 \*\*  
## CountryUGA -5.6658 6.1680 -0.919 0.3599   
## CountryURT -3.8904 5.8431 -0.666 0.5066   
## CountrySWA -10.6938 11.4757 -0.932 0.3530   
## CountrySEN -10.1084 4.7367 -2.134 0.0346 \*   
## CountryZAI -10.6937 11.4757 -0.932 0.3530   
## CountryMOZ -7.6937 8.5535 -0.899 0.3699   
## CountryMLI -10.6937 4.5974 -2.326 0.0214 \*   
## CountryKEN 3.9296 4.9383 0.796 0.4275   
## CountryETH -0.2337 11.4757 -0.020 0.9838   
## CountryGUI -10.6938 4.7367 -2.258 0.0255 \*   
## CountryGHA -10.6938 4.5974 -2.326 0.0214 \*   
## CountryBKF -6.4140 4.1659 -1.540 0.1259   
## CountryZIM 5.6492 5.1321 1.101 0.2729   
## CountryZAM 24.2362 11.4757 2.112 0.0365 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 34.93 10.82 3.228 0.00155 \*\*  
## CountrySAF -24.24 11.48 -2.112 0.03645 \*   
## CountryUGA -29.90 11.85 -2.523 0.01275 \*   
## CountryURT -28.13 11.69 -2.407 0.01739 \*   
## CountrySWA -34.93 15.30 -2.283 0.02393 \*   
## CountrySEN -34.34 11.17 -3.074 0.00254 \*\*  
## CountryZAI -34.93 15.30 -2.283 0.02393 \*   
## CountryMOZ -31.93 13.25 -2.410 0.01726 \*   
## CountryMLI -34.93 11.12 -3.142 0.00204 \*\*  
## CountryKEN -20.31 11.26 -1.803 0.07348 .   
## CountryETH -24.47 15.30 -1.599 0.11200   
## CountryGUI -34.93 11.17 -3.126 0.00215 \*\*  
## CountryGHA -34.93 11.12 -3.142 0.00204 \*\*  
## CountryBKF -30.65 10.94 -2.801 0.00582 \*\*  
## CountryZIM -18.59 11.35 -1.638 0.10365   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_Tsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.34 -4.28 0.00 0.00 57.34   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 16.343 3.421 4.777 4.42e-06 \*\*\*  
## CountryZAM 18.587 11.347 1.638 0.103654   
## CountrySAF -5.649 5.132 -1.101 0.272872   
## CountryUGA -11.315 5.926 -1.909 0.058245 .   
## CountryURT -9.540 5.587 -1.707 0.089940 .   
## CountrySWA -16.343 11.347 -1.440 0.152018   
## CountrySEN -15.758 4.417 -3.568 0.000493 \*\*\*  
## CountryZAI -16.343 11.347 -1.440 0.152018   
## CountryMOZ -13.343 8.381 -1.592 0.113597   
## CountryMLI -16.343 4.267 -3.830 0.000192 \*\*\*  
## CountryKEN -1.720 4.633 -0.371 0.711037   
## CountryETH -5.883 11.347 -0.518 0.604963   
## CountryGUI -16.343 4.417 -3.700 0.000308 \*\*\*  
## CountryGHA -16.343 4.267 -3.830 0.000192 \*\*\*  
## CountryBKF -12.063 3.798 -3.176 0.001835 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 117.0589)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 16505 on 141 degrees of freedom  
## AIC: 1201.9  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TcTv per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.21628 0.16487 1.312 0.192   
## CountryZIM -0.21628 0.37956 -0.570 0.570   
## CountryZAM -0.21628 1.09363 -0.198 0.844   
## CountrySAF 0.01997 0.41628 0.048 0.962   
## CountryUGA -0.21628 0.51083 -0.423 0.673   
## CountryURT -0.21628 0.47116 -0.459 0.647   
## CountrySWA -0.21628 1.09363 -0.198 0.844   
## CountrySEN -0.21628 0.32420 -0.667 0.506   
## CountryZAI -0.21628 1.09363 -0.198 0.844   
## CountryMOZ -0.21628 0.78205 -0.277 0.783   
## CountryMLI -0.21628 0.30351 -0.713 0.477   
## CountryKEN 1.82872 0.35297 5.181 7.48e-07 \*\*\*  
## CountryETH -0.21628 1.09363 -0.198 0.844   
## CountryGUI -0.21628 0.32420 -0.667 0.506   
## CountryGHA -0.21628 0.30351 -0.713 0.477   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.004e-15 2.548e-01 0.000 1.000   
## CountryBKF 2.163e-01 3.035e-01 0.713 0.477   
## CountryZIM 2.887e-15 4.264e-01 0.000 1.000   
## CountryZAM 5.090e-16 1.111e+00 0.000 1.000   
## CountrySAF 2.363e-01 4.594e-01 0.514 0.608   
## CountryUGA -5.441e-15 5.465e-01 0.000 1.000   
## CountryURT 2.003e-15 5.096e-01 0.000 1.000   
## CountrySWA 2.463e-15 1.111e+00 0.000 1.000   
## CountrySEN 1.552e-15 3.780e-01 0.000 1.000   
## CountryZAI 2.394e-15 1.111e+00 0.000 1.000   
## CountryMOZ 2.004e-15 8.058e-01 0.000 1.000   
## CountryMLI 1.173e-15 3.604e-01 0.000 1.000   
## CountryKEN 2.045e+00 4.029e-01 5.076 1.2e-06 \*\*\*  
## CountryETH 4.605e-15 1.111e+00 0.000 1.000   
## CountryGUI 1.950e-15 3.780e-01 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.237e-15 2.791e-01 0.000 1.000   
## CountryGHA -4.980e-15 3.780e-01 0.000 1.000   
## CountryBKF 2.163e-01 3.242e-01 0.667 0.506   
## CountryZIM -3.309e-15 4.414e-01 0.000 1.000   
## CountryZAM 2.952e-14 1.117e+00 0.000 1.000   
## CountrySAF 2.362e-01 4.733e-01 0.499 0.618   
## CountryUGA -6.271e-15 5.583e-01 0.000 1.000   
## CountryURT -6.890e-15 5.222e-01 0.000 1.000   
## CountrySWA -1.534e-14 1.117e+00 0.000 1.000   
## CountrySEN -3.293e-15 3.948e-01 0.000 1.000   
## CountryZAI -6.731e-15 1.117e+00 0.000 1.000   
## CountryMOZ -1.760e-15 8.138e-01 0.000 1.000   
## CountryMLI -4.293e-15 3.780e-01 0.000 1.000   
## CountryKEN 2.045e+00 4.187e-01 4.884 2.78e-06 \*\*\*  
## CountryETH 2.007e-15 1.117e+00 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.162e-14 1.081e+00 0.000 1.0000   
## CountryGUI 1.175e-14 1.117e+00 0.000 1.0000   
## CountryGHA 1.184e-14 1.111e+00 0.000 1.0000   
## CountryBKF 2.163e-01 1.094e+00 0.198 0.8435   
## CountryZIM 1.329e-14 1.134e+00 0.000 1.0000   
## CountryZAM 2.493e-14 1.529e+00 0.000 1.0000   
## CountrySAF 2.363e-01 1.147e+00 0.206 0.8371   
## CountryUGA 1.201e-14 1.184e+00 0.000 1.0000   
## CountryURT 1.389e-14 1.168e+00 0.000 1.0000   
## CountrySWA 1.166e-14 1.529e+00 0.000 1.0000   
## CountrySEN 1.064e-14 1.117e+00 0.000 1.0000   
## CountryZAI 9.636e-15 1.529e+00 0.000 1.0000   
## CountryMOZ 1.229e-14 1.324e+00 0.000 1.0000   
## CountryMLI 1.196e-14 1.111e+00 0.000 1.0000   
## CountryKEN 2.045e+00 1.125e+00 1.817 0.0713 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.0450 0.3121 6.552 9.86e-10 \*\*\*  
## CountryETH -2.0450 1.1253 -1.817 0.071289 .   
## CountryGUI -2.0450 0.4187 -4.884 2.78e-06 \*\*\*  
## CountryGHA -2.0450 0.4029 -5.076 1.20e-06 \*\*\*  
## CountryBKF -1.8287 0.3530 -5.181 7.48e-07 \*\*\*  
## CountryZIM -2.0450 0.4629 -4.418 1.97e-05 \*\*\*  
## CountryZAM -2.0450 1.1253 -1.817 0.071289 .   
## CountrySAF -1.8087 0.4935 -3.665 0.000349 \*\*\*  
## CountryUGA -2.0450 0.5755 -3.554 0.000517 \*\*\*  
## CountryURT -2.0450 0.5406 -3.783 0.000228 \*\*\*  
## CountrySWA -2.0450 1.1253 -1.817 0.071289 .   
## CountrySEN -2.0450 0.4187 -4.884 2.78e-06 \*\*\*  
## CountryZAI -2.0450 1.1253 -1.817 0.071289 .   
## CountryMOZ -2.0450 0.8257 -2.477 0.014446 \*   
## CountryMLI -2.0450 0.4029 -5.076 1.20e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.333e-15 2.548e-01 0.000 1.000   
## CountryKEN 2.045e+00 4.029e-01 5.076 1.2e-06 \*\*\*  
## CountryETH -4.973e-15 1.111e+00 0.000 1.000   
## CountryGUI -2.874e-16 3.780e-01 0.000 1.000   
## CountryGHA 3.881e-15 3.604e-01 0.000 1.000   
## CountryBKF 2.163e-01 3.035e-01 0.713 0.477   
## CountryZIM -1.206e-15 4.264e-01 0.000 1.000   
## CountryZAM -2.583e-15 1.111e+00 0.000 1.000   
## CountrySAF 2.362e-01 4.594e-01 0.514 0.608   
## CountryUGA -6.729e-16 5.465e-01 0.000 1.000   
## CountryURT -2.343e-19 5.096e-01 0.000 1.000   
## CountrySWA -2.345e-16 1.111e+00 0.000 1.000   
## CountrySEN -1.728e-15 3.780e-01 0.000 1.000   
## CountryZAI -6.743e-16 1.111e+00 0.000 1.000   
## CountryMOZ -1.055e-15 8.058e-01 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.042e-16 7.645e-01 0.000 1.0000   
## CountryMLI -9.460e-16 8.058e-01 0.000 1.0000   
## CountryKEN 2.045e+00 8.257e-01 2.477 0.0144 \*  
## CountryETH 1.538e-15 1.324e+00 0.000 1.0000   
## CountryGUI -1.131e-14 8.138e-01 0.000 1.0000   
## CountryGHA 2.303e-15 8.058e-01 0.000 1.0000   
## CountryBKF 2.163e-01 7.820e-01 0.277 0.7825   
## CountryZIM 1.313e-15 8.374e-01 0.000 1.0000   
## CountryZAM 5.483e-16 1.324e+00 0.000 1.0000   
## CountrySAF 2.363e-01 8.547e-01 0.276 0.7826   
## CountryUGA -2.056e-16 9.045e-01 0.000 1.0000   
## CountryURT 1.663e-15 8.827e-01 0.000 1.0000   
## CountrySWA 9.890e-16 1.324e+00 0.000 1.0000   
## CountrySEN 1.972e-15 8.138e-01 0.000 1.0000   
## CountryZAI 5.439e-16 1.324e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.182e-15 1.081e+00 0.000 1.0000   
## CountryMOZ -7.572e-15 1.324e+00 0.000 1.0000   
## CountryMLI -4.622e-15 1.111e+00 0.000 1.0000   
## CountryKEN 2.045e+00 1.125e+00 1.817 0.0713 .  
## CountryETH -3.152e-14 1.529e+00 0.000 1.0000   
## CountryGUI -7.254e-15 1.117e+00 0.000 1.0000   
## CountryGHA -4.887e-15 1.111e+00 0.000 1.0000   
## CountryBKF 2.163e-01 1.094e+00 0.198 0.8435   
## CountryZIM -5.336e-15 1.134e+00 0.000 1.0000   
## CountryZAM 5.839e-16 1.529e+00 0.000 1.0000   
## CountrySAF 2.362e-01 1.147e+00 0.206 0.8371   
## CountryUGA -5.733e-15 1.184e+00 0.000 1.0000   
## CountryURT -5.431e-15 1.168e+00 0.000 1.0000   
## CountrySWA -7.103e-15 1.529e+00 0.000 1.0000   
## CountrySEN -8.370e-15 1.117e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.988e-16 2.791e-01 0.000 1.000   
## CountryZAI -4.742e-15 1.117e+00 0.000 1.000   
## CountryMOZ -9.054e-16 8.138e-01 0.000 1.000   
## CountryMLI 2.786e-17 3.780e-01 0.000 1.000   
## CountryKEN 2.045e+00 4.187e-01 4.884 2.78e-06 \*\*\*  
## CountryETH 1.336e-14 1.117e+00 0.000 1.000   
## CountryGUI 1.923e-15 3.948e-01 0.000 1.000   
## CountryGHA 2.425e-15 3.780e-01 0.000 1.000   
## CountryBKF 2.163e-01 3.242e-01 0.667 0.506   
## CountryZIM 2.211e-15 4.414e-01 0.000 1.000   
## CountryZAM 3.167e-16 1.117e+00 0.000 1.000   
## CountrySAF 2.363e-01 4.733e-01 0.499 0.618   
## CountryUGA 2.782e-15 5.583e-01 0.000 1.000   
## CountryURT 2.033e-15 5.222e-01 0.000 1.000   
## CountrySWA 2.494e-15 1.117e+00 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.131e-14 1.081e+00 0.000 1.0000   
## CountrySEN -1.177e-14 1.117e+00 0.000 1.0000   
## CountryZAI -1.048e-14 1.529e+00 0.000 1.0000   
## CountryMOZ -1.222e-14 1.324e+00 0.000 1.0000   
## CountryMLI -1.773e-14 1.111e+00 0.000 1.0000   
## CountryKEN 2.045e+00 1.125e+00 1.817 0.0713 .  
## CountryETH -8.075e-15 1.529e+00 0.000 1.0000   
## CountryGUI -8.970e-15 1.117e+00 0.000 1.0000   
## CountryGHA -9.031e-15 1.111e+00 0.000 1.0000   
## CountryBKF 2.163e-01 1.094e+00 0.198 0.8435   
## CountryZIM -8.851e-15 1.134e+00 0.000 1.0000   
## CountryZAM -6.940e-15 1.529e+00 0.000 1.0000   
## CountrySAF 2.362e-01 1.147e+00 0.206 0.8371   
## CountryUGA -8.357e-15 1.184e+00 0.000 1.0000   
## CountryURT -8.574e-15 1.168e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -8.621e-15 4.414e-01 0.000 1.000000   
## CountrySWA 4.171e-15 1.168e+00 0.000 1.000000   
## CountrySEN 9.215e-15 5.222e-01 0.000 1.000000   
## CountryZAI 9.200e-15 1.168e+00 0.000 1.000000   
## CountryMOZ 3.360e-15 8.827e-01 0.000 1.000000   
## CountryMLI 7.216e-15 5.096e-01 0.000 1.000000   
## CountryKEN 2.045e+00 5.406e-01 3.783 0.000228 \*\*\*  
## CountryETH 5.840e-15 1.168e+00 0.000 1.000000   
## CountryGUI 9.271e-15 5.222e-01 0.000 1.000000   
## CountryGHA 9.174e-15 5.096e-01 0.000 1.000000   
## CountryBKF 2.163e-01 4.712e-01 0.459 0.646913   
## CountryZIM 8.736e-15 5.583e-01 0.000 1.000000   
## CountryZAM 8.956e-15 1.168e+00 0.000 1.000000   
## CountrySAF 2.363e-01 5.839e-01 0.405 0.686367   
## CountryUGA 8.126e-15 6.547e-01 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.629e-16 4.835e-01 0.000 1.000000   
## CountryURT 1.053e-15 6.547e-01 0.000 1.000000   
## CountrySWA -6.275e-16 1.184e+00 0.000 1.000000   
## CountrySEN 9.718e-16 5.583e-01 0.000 1.000000   
## CountryZAI 3.860e-14 1.184e+00 0.000 1.000000   
## CountryMOZ 2.023e-15 9.045e-01 0.000 1.000000   
## CountryMLI -5.353e-16 5.465e-01 0.000 1.000000   
## CountryKEN 2.045e+00 5.755e-01 3.554 0.000517 \*\*\*  
## CountryETH 1.094e-15 1.184e+00 0.000 1.000000   
## CountryGUI -6.636e-16 5.583e-01 0.000 1.000000   
## CountryGHA -1.739e-15 5.465e-01 0.000 1.000000   
## CountryBKF 2.163e-01 5.108e-01 0.423 0.672659   
## CountryZIM -7.119e-16 5.922e-01 0.000 1.000000   
## CountryZAM -9.966e-15 1.184e+00 0.000 1.000000   
## CountrySAF 2.362e-01 6.163e-01 0.383 0.702065   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.23625 0.38224 0.618 0.537524   
## CountryUGA -0.23625 0.61634 -0.383 0.702065   
## CountryURT -0.23625 0.58388 -0.405 0.686367   
## CountrySWA -0.23625 1.14671 -0.206 0.837069   
## CountrySEN -0.23625 0.47332 -0.499 0.618459   
## CountryZAI -0.23625 1.14671 -0.206 0.837069   
## CountryMOZ -0.23625 0.85471 -0.276 0.782637   
## CountryMLI -0.23625 0.45939 -0.514 0.607870   
## CountryKEN 1.80875 0.49347 3.665 0.000349 \*\*\*  
## CountryETH -0.23625 1.14671 -0.206 0.837069   
## CountryGUI -0.23625 0.47332 -0.499 0.618459   
## CountryGHA -0.23625 0.45939 -0.514 0.607870   
## CountryBKF -0.01997 0.41628 -0.048 0.961804   
## CountryZIM -0.23625 0.51282 -0.461 0.645735   
## CountryZAM -0.23625 1.14671 -0.206 0.837069   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.848e-14 1.081e+00 0.000 1.0000   
## CountrySAF 2.363e-01 1.147e+00 0.206 0.8371   
## CountryUGA 3.913e-14 1.184e+00 0.000 1.0000   
## CountryURT 3.890e-14 1.168e+00 0.000 1.0000   
## CountrySWA 8.231e-15 1.529e+00 0.000 1.0000   
## CountrySEN 3.836e-14 1.117e+00 0.000 1.0000   
## CountryZAI 3.776e-14 1.529e+00 0.000 1.0000   
## CountryMOZ 3.947e-14 1.324e+00 0.000 1.0000   
## CountryMLI 3.869e-14 1.111e+00 0.000 1.0000   
## CountryKEN 2.045e+00 1.125e+00 1.817 0.0713 .  
## CountryETH 3.036e-14 1.529e+00 0.000 1.0000   
## CountryGUI 3.866e-14 1.117e+00 0.000 1.0000   
## CountryGHA 3.831e-14 1.111e+00 0.000 1.0000   
## CountryBKF 2.163e-01 1.094e+00 0.198 0.8435   
## CountryZIM 3.880e-14 1.134e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTv) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.0450 -0.2163 0.0000 0.0000 7.9550   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.955e-15 3.419e-01 0.000 1.000   
## CountryZAM -1.108e-14 1.134e+00 0.000 1.000   
## CountrySAF 2.362e-01 5.128e-01 0.461 0.646   
## CountryUGA -5.150e-15 5.922e-01 0.000 1.000   
## CountryURT -2.163e-14 5.583e-01 0.000 1.000   
## CountrySWA -1.589e-14 1.134e+00 0.000 1.000   
## CountrySEN -5.951e-15 4.414e-01 0.000 1.000   
## CountryZAI -1.082e-14 1.134e+00 0.000 1.000   
## CountryMOZ -1.477e-14 8.374e-01 0.000 1.000   
## CountryMLI -5.405e-15 4.264e-01 0.000 1.000   
## CountryKEN 2.045e+00 4.629e-01 4.418 1.97e-05 \*\*\*  
## CountryETH -6.762e-15 1.134e+00 0.000 1.000   
## CountryGUI -5.751e-15 4.414e-01 0.000 1.000   
## CountryGHA -5.573e-15 4.264e-01 0.000 1.000   
## CountryBKF 2.163e-01 3.796e-01 0.570 0.570   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.168838)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 164.81 on 141 degrees of freedom  
## AIC: 483.28  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TcTz per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.35860 0.40932 0.876 0.382   
## CountryZIM -0.35860 0.94232 -0.381 0.704   
## CountryZAM -0.35860 2.71512 -0.132 0.895   
## CountrySAF -0.35860 1.03348 -0.347 0.729   
## CountryUGA -0.35860 1.26823 -0.283 0.778   
## CountryURT -0.12360 1.16973 -0.106 0.916   
## CountrySWA -0.35860 2.71512 -0.132 0.895   
## CountrySEN -0.35860 0.80488 -0.446 0.657   
## CountryZAI -0.35860 2.71512 -0.132 0.895   
## CountryMOZ -0.35860 1.94157 -0.185 0.854   
## CountryMLI -0.35860 0.75351 -0.476 0.635   
## CountryKEN -0.02444 0.87630 -0.028 0.978   
## CountryETH -0.35860 2.71512 -0.132 0.895   
## CountryGUI -0.35860 0.80488 -0.446 0.657   
## CountryGHA 3.43084 0.75351 4.553 1.13e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.7894 0.6326 5.990 1.66e-08 \*\*\*  
## CountryBKF -3.4308 0.7535 -4.553 1.13e-05 \*\*\*  
## CountryZIM -3.7894 1.0586 -3.580 0.000472 \*\*\*  
## CountryZAM -3.7894 2.7576 -1.374 0.171571   
## CountrySAF -3.7894 1.1405 -3.323 0.001136 \*\*   
## CountryUGA -3.7894 1.3569 -2.793 0.005952 \*\*   
## CountryURT -3.5544 1.2653 -2.809 0.005672 \*\*   
## CountrySWA -3.7894 2.7576 -1.374 0.171571   
## CountrySEN -3.7894 0.9384 -4.038 8.80e-05 \*\*\*  
## CountryZAI -3.7894 2.7576 -1.374 0.171571   
## CountryMOZ -3.7894 2.0006 -1.894 0.060253 .   
## CountryMLI -3.7894 0.8947 -4.235 4.09e-05 \*\*\*  
## CountryKEN -3.4553 1.0003 -3.454 0.000729 \*\*\*  
## CountryETH -3.7894 2.7576 -1.374 0.171571   
## CountryGUI -3.7894 0.9384 -4.038 8.80e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.209e-15 6.930e-01 0.000 1.000   
## CountryGHA 3.789e+00 9.384e-01 4.038 8.8e-05 \*\*\*  
## CountryBKF 3.586e-01 8.049e-01 0.446 0.657   
## CountryZIM -2.041e-16 1.096e+00 0.000 1.000   
## CountryZAM 5.004e-15 2.772e+00 0.000 1.000   
## CountrySAF -4.096e-16 1.175e+00 0.000 1.000   
## CountryUGA -5.811e-16 1.386e+00 0.000 1.000   
## CountryURT 2.350e-01 1.297e+00 0.181 0.856   
## CountrySWA -8.210e-16 2.772e+00 0.000 1.000   
## CountrySEN -2.249e-16 9.801e-01 0.000 1.000   
## CountryZAI 5.601e-16 2.772e+00 0.000 1.000   
## CountryMOZ -5.156e-16 2.021e+00 0.000 1.000   
## CountryMLI -3.186e-16 9.384e-01 0.000 1.000   
## CountryKEN 3.342e-01 1.040e+00 0.321 0.748   
## CountryETH -3.411e-15 2.772e+00 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.535e-16 2.684e+00 0.000 1.000  
## CountryGUI 3.075e-15 2.772e+00 0.000 1.000  
## CountryGHA 3.789e+00 2.758e+00 1.374 0.172  
## CountryBKF 3.586e-01 2.715e+00 0.132 0.895  
## CountryZIM 1.333e-15 2.815e+00 0.000 1.000  
## CountryZAM 1.441e-15 3.796e+00 0.000 1.000  
## CountrySAF -7.151e-16 2.847e+00 0.000 1.000  
## CountryUGA -2.882e-16 2.940e+00 0.000 1.000  
## CountryURT 2.350e-01 2.899e+00 0.081 0.936  
## CountrySWA -1.979e-15 3.796e+00 0.000 1.000  
## CountrySEN -8.517e-16 2.772e+00 0.000 1.000  
## CountryZAI -1.156e-15 3.796e+00 0.000 1.000  
## CountryMOZ 1.420e-15 3.287e+00 0.000 1.000  
## CountryMLI -7.274e-16 2.758e+00 0.000 1.000  
## CountryKEN 3.342e-01 2.794e+00 0.120 0.905  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.33417 0.77483 0.431 0.666925   
## CountryETH -0.33417 2.79369 -0.120 0.904958   
## CountryGUI -0.33417 1.03954 -0.321 0.748341   
## CountryGHA 3.45528 1.00030 3.454 0.000729 \*\*\*  
## CountryBKF 0.02444 0.87630 0.028 0.977791   
## CountryZIM -0.33417 1.14926 -0.291 0.771656   
## CountryZAM -0.33417 2.79369 -0.120 0.904958   
## CountrySAF -0.33417 1.22511 -0.273 0.785434   
## CountryUGA -0.33417 1.42871 -0.234 0.815407   
## CountryURT -0.09917 1.34204 -0.074 0.941201   
## CountrySWA -0.33417 2.79369 -0.120 0.904958   
## CountrySEN -0.33417 1.03954 -0.321 0.748341   
## CountryZAI -0.33417 2.79369 -0.120 0.904958   
## CountryMOZ -0.33417 2.05001 -0.163 0.870746   
## CountryMLI -0.33417 1.00030 -0.334 0.738826   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.089e-16 6.326e-01 0.000 1.000   
## CountryKEN 3.342e-01 1.000e+00 0.334 0.739   
## CountryETH 1.768e-15 2.758e+00 0.000 1.000   
## CountryGUI -6.666e-16 9.384e-01 0.000 1.000   
## CountryGHA 3.789e+00 8.947e-01 4.235 4.09e-05 \*\*\*  
## CountryBKF 3.586e-01 7.535e-01 0.476 0.635   
## CountryZIM -5.254e-16 1.059e+00 0.000 1.000   
## CountryZAM -6.858e-16 2.758e+00 0.000 1.000   
## CountrySAF -1.921e-16 1.141e+00 0.000 1.000   
## CountryUGA -8.262e-16 1.357e+00 0.000 1.000   
## CountryURT 2.350e-01 1.265e+00 0.186 0.853   
## CountrySWA -1.292e-15 2.758e+00 0.000 1.000   
## CountrySEN -9.176e-16 9.384e-01 0.000 1.000   
## CountryZAI -1.251e-16 2.758e+00 0.000 1.000   
## CountryMOZ -1.138e-16 2.001e+00 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.451e-15 1.898e+00 0.000 1.0000   
## CountryMLI -3.412e-15 2.001e+00 0.000 1.0000   
## CountryKEN 3.342e-01 2.050e+00 0.163 0.8707   
## CountryETH -2.103e-15 3.287e+00 0.000 1.0000   
## CountryGUI -4.523e-15 2.021e+00 0.000 1.0000   
## CountryGHA 3.789e+00 2.001e+00 1.894 0.0603 .  
## CountryBKF 3.586e-01 1.942e+00 0.185 0.8537   
## CountryZIM -2.962e-15 2.079e+00 0.000 1.0000   
## CountryZAM -4.012e-15 3.287e+00 0.000 1.0000   
## CountrySAF -3.407e-15 2.122e+00 0.000 1.0000   
## CountryUGA -2.651e-15 2.246e+00 0.000 1.0000   
## CountryURT 2.350e-01 2.192e+00 0.107 0.9148   
## CountrySWA -7.183e-15 3.287e+00 0.000 1.0000   
## CountrySEN -3.305e-15 2.021e+00 0.000 1.0000   
## CountryZAI -1.700e-15 3.287e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.585e-15 2.684e+00 0.000 1.000  
## CountryMOZ 1.695e-16 3.287e+00 0.000 1.000  
## CountryMLI -1.507e-15 2.758e+00 0.000 1.000  
## CountryKEN 3.342e-01 2.794e+00 0.120 0.905  
## CountryETH 8.687e-15 3.796e+00 0.000 1.000  
## CountryGUI -9.789e-16 2.772e+00 0.000 1.000  
## CountryGHA 3.789e+00 2.758e+00 1.374 0.172  
## CountryBKF 3.586e-01 2.715e+00 0.132 0.895  
## CountryZIM -3.095e-15 2.815e+00 0.000 1.000  
## CountryZAM -4.302e-15 3.796e+00 0.000 1.000  
## CountrySAF -4.216e-15 2.847e+00 0.000 1.000  
## CountryUGA -4.170e-15 2.940e+00 0.000 1.000  
## CountryURT 2.350e-01 2.899e+00 0.081 0.936  
## CountrySWA -3.049e-15 3.796e+00 0.000 1.000  
## CountrySEN -3.741e-15 2.772e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.874e-15 6.930e-01 0.000 1.000   
## CountryZAI 9.262e-16 2.772e+00 0.000 1.000   
## CountryMOZ 3.636e-15 2.021e+00 0.000 1.000   
## CountryMLI 1.727e-15 9.384e-01 0.000 1.000   
## CountryKEN 3.342e-01 1.040e+00 0.321 0.748   
## CountryETH 2.669e-15 2.772e+00 0.000 1.000   
## CountryGUI 8.571e-16 9.801e-01 0.000 1.000   
## CountryGHA 3.789e+00 9.384e-01 4.038 8.8e-05 \*\*\*  
## CountryBKF 3.586e-01 8.049e-01 0.446 0.657   
## CountryZIM 1.289e-15 1.096e+00 0.000 1.000   
## CountryZAM -3.120e-14 2.772e+00 0.000 1.000   
## CountrySAF 1.648e-15 1.175e+00 0.000 1.000   
## CountryUGA 1.238e-15 1.386e+00 0.000 1.000   
## CountryURT 2.350e-01 1.297e+00 0.181 0.856   
## CountrySWA 9.110e-16 2.772e+00 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -7.527e-15 2.684e+00 0.000 1.000  
## CountrySEN 1.102e-14 2.772e+00 0.000 1.000  
## CountryZAI 6.513e-15 3.796e+00 0.000 1.000  
## CountryMOZ 1.088e-14 3.287e+00 0.000 1.000  
## CountryMLI 5.711e-15 2.758e+00 0.000 1.000  
## CountryKEN 3.342e-01 2.794e+00 0.120 0.905  
## CountryETH 1.209e-14 3.796e+00 0.000 1.000  
## CountryGUI 8.285e-15 2.772e+00 0.000 1.000  
## CountryGHA 3.789e+00 2.758e+00 1.374 0.172  
## CountryBKF 3.586e-01 2.715e+00 0.132 0.895  
## CountryZIM 8.210e-15 2.815e+00 0.000 1.000  
## CountryZAM 5.515e-15 3.796e+00 0.000 1.000  
## CountrySAF 9.175e-15 2.847e+00 0.000 1.000  
## CountryUGA 6.696e-15 2.940e+00 0.000 1.000  
## CountryURT 2.350e-01 2.899e+00 0.081 0.936  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.23500 1.09577 0.214 0.83050   
## CountrySWA -0.23500 2.89915 -0.081 0.93551   
## CountrySEN -0.23500 1.29654 -0.181 0.85643   
## CountryZAI -0.23500 2.89915 -0.081 0.93551   
## CountryMOZ -0.23500 2.19155 -0.107 0.91476   
## CountryMLI -0.23500 1.26529 -0.186 0.85292   
## CountryKEN 0.09917 1.34204 0.074 0.94120   
## CountryETH -0.23500 2.89915 -0.081 0.93551   
## CountryGUI -0.23500 1.29654 -0.181 0.85643   
## CountryGHA 3.55444 1.26529 2.809 0.00567 \*\*  
## CountryBKF 0.12360 1.16973 0.106 0.91599   
## CountryZIM -0.23500 1.38606 -0.170 0.86561   
## CountryZAM -0.23500 2.89915 -0.081 0.93551   
## CountrySAF -0.23500 1.44957 -0.162 0.87145   
## CountryUGA -0.23500 1.62530 -0.145 0.88524   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.222e-15 1.200e+00 0.000 1.00000   
## CountryURT 2.350e-01 1.625e+00 0.145 0.88524   
## CountrySWA 1.962e-15 2.940e+00 0.000 1.00000   
## CountrySEN 4.112e-15 1.386e+00 0.000 1.00000   
## CountryZAI -4.143e-15 2.940e+00 0.000 1.00000   
## CountryMOZ -8.805e-17 2.246e+00 0.000 1.00000   
## CountryMLI -3.170e-16 1.357e+00 0.000 1.00000   
## CountryKEN 3.342e-01 1.429e+00 0.234 0.81541   
## CountryETH -1.171e-15 2.940e+00 0.000 1.00000   
## CountryGUI 1.119e-15 1.386e+00 0.000 1.00000   
## CountryGHA 3.789e+00 1.357e+00 2.793 0.00595 \*\*  
## CountryBKF 3.586e-01 1.268e+00 0.283 0.77778   
## CountryZIM 1.815e-15 1.470e+00 0.000 1.00000   
## CountryZAM 9.729e-16 2.940e+00 0.000 1.00000   
## CountrySAF 1.768e-15 1.530e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.492e-15 9.490e-01 0.000 1.00000   
## CountryUGA -2.430e-15 1.530e+00 0.000 1.00000   
## CountryURT 2.350e-01 1.450e+00 0.162 0.87145   
## CountrySWA -7.619e-16 2.847e+00 0.000 1.00000   
## CountrySEN -5.865e-16 1.175e+00 0.000 1.00000   
## CountryZAI -4.824e-15 2.847e+00 0.000 1.00000   
## CountryMOZ 8.483e-17 2.122e+00 0.000 1.00000   
## CountryMLI -1.449e-15 1.141e+00 0.000 1.00000   
## CountryKEN 3.342e-01 1.225e+00 0.273 0.78543   
## CountryETH 5.042e-15 2.847e+00 0.000 1.00000   
## CountryGUI 1.249e-16 1.175e+00 0.000 1.00000   
## CountryGHA 3.789e+00 1.141e+00 3.323 0.00114 \*\*  
## CountryBKF 3.586e-01 1.033e+00 0.347 0.72912   
## CountryZIM -1.675e-15 1.273e+00 0.000 1.00000   
## CountryZAM -8.464e-16 2.847e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -4.631e-15 2.684e+00 0.000 1.000  
## CountrySAF 3.665e-15 2.847e+00 0.000 1.000  
## CountryUGA 4.773e-15 2.940e+00 0.000 1.000  
## CountryURT 2.350e-01 2.899e+00 0.081 0.936  
## CountrySWA -3.759e-15 3.796e+00 0.000 1.000  
## CountrySEN 3.169e-15 2.772e+00 0.000 1.000  
## CountryZAI 6.544e-15 3.796e+00 0.000 1.000  
## CountryMOZ 2.690e-15 3.287e+00 0.000 1.000  
## CountryMLI 5.472e-15 2.758e+00 0.000 1.000  
## CountryKEN 3.342e-01 2.794e+00 0.120 0.905  
## CountryETH 8.794e-15 3.796e+00 0.000 1.000  
## CountryGUI 5.672e-15 2.772e+00 0.000 1.000  
## CountryGHA 3.789e+00 2.758e+00 1.374 0.172  
## CountryBKF 3.586e-01 2.715e+00 0.132 0.895  
## CountryZIM 4.105e-15 2.815e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.194e-15 8.488e-01 0.000 1.000000   
## CountryZAM -5.394e-15 2.815e+00 0.000 1.000000   
## CountrySAF -3.226e-16 1.273e+00 0.000 1.000000   
## CountryUGA -2.595e-15 1.470e+00 0.000 1.000000   
## CountryURT 2.350e-01 1.386e+00 0.170 0.865610   
## CountrySWA -5.910e-15 2.815e+00 0.000 1.000000   
## CountrySEN -3.719e-15 1.096e+00 0.000 1.000000   
## CountryZAI 1.144e-16 2.815e+00 0.000 1.000000   
## CountryMOZ 4.144e-15 2.079e+00 0.000 1.000000   
## CountryMLI -5.334e-16 1.059e+00 0.000 1.000000   
## CountryKEN 3.342e-01 1.149e+00 0.291 0.771656   
## CountryETH -2.672e-15 2.815e+00 0.000 1.000000   
## CountryGUI -3.155e-15 1.096e+00 0.000 1.000000   
## CountryGHA 3.789e+00 1.059e+00 3.580 0.000472 \*\*\*  
## CountryBKF 3.586e-01 9.423e-01 0.381 0.704107   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TcTsg per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1012 0.3926 0.258 0.79701   
## CountryZIM 1.5788 0.9037 1.747 0.08281 .   
## CountryZAM 7.4288 2.6039 2.853 0.00498 \*\*   
## CountrySAF 0.3538 0.9912 0.357 0.72163   
## CountryUGA 0.1108 1.2163 0.091 0.92752   
## CountryURT 4.5622 1.1218 4.067 7.89e-05 \*\*\*  
## CountrySWA -0.1012 2.6039 -0.039 0.96906   
## CountrySEN -0.1012 0.7719 -0.131 0.89592   
## CountryZAI -0.1012 2.6039 -0.039 0.96906   
## CountryMOZ -0.1012 1.8621 -0.054 0.95675   
## CountryMLI -0.1012 0.7227 -0.140 0.88887   
## CountryKEN 4.2872 0.8404 5.101 1.07e-06 \*\*\*  
## CountryETH 0.5488 2.6039 0.211 0.83337   
## CountryGUI -0.1012 0.7719 -0.131 0.89592   
## CountryGHA -0.1012 0.7227 -0.140 0.88887   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -5.756e-15 6.067e-01 0.000 1.000000   
## CountryBKF 1.012e-01 7.227e-01 0.140 0.888870   
## CountryZIM 1.680e+00 1.015e+00 1.655 0.100202   
## CountryZAM 7.530e+00 2.645e+00 2.847 0.005070 \*\*   
## CountrySAF 4.550e-01 1.094e+00 0.416 0.678059   
## CountryUGA 2.120e-01 1.301e+00 0.163 0.870820   
## CountryURT 4.663e+00 1.213e+00 3.843 0.000183 \*\*\*  
## CountrySWA 5.657e-15 2.645e+00 0.000 1.000000   
## CountrySEN 1.014e-14 8.999e-01 0.000 1.000000   
## CountryZAI 7.705e-15 2.645e+00 0.000 1.000000   
## CountryMOZ 1.346e-14 1.919e+00 0.000 1.000000   
## CountryMLI 4.198e-15 8.581e-01 0.000 1.000000   
## CountryKEN 4.388e+00 9.593e-01 4.574 1.04e-05 \*\*\*  
## CountryETH 6.500e-01 2.645e+00 0.246 0.806215   
## CountryGUI 3.901e-15 8.999e-01 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.850e-15 6.646e-01 0.000 1.000000   
## CountryGHA -5.634e-15 8.999e-01 0.000 1.000000   
## CountryBKF 1.012e-01 7.719e-01 0.131 0.895920   
## CountryZIM 1.680e+00 1.051e+00 1.599 0.112141   
## CountryZAM 7.530e+00 2.659e+00 2.832 0.005298 \*\*   
## CountrySAF 4.550e-01 1.127e+00 0.404 0.687016   
## CountryUGA 2.120e-01 1.329e+00 0.159 0.873517   
## CountryURT 4.663e+00 1.243e+00 3.750 0.000257 \*\*\*  
## CountrySWA -3.896e-15 2.659e+00 0.000 1.000000   
## CountrySEN -4.078e-15 9.400e-01 0.000 1.000000   
## CountryZAI -7.877e-15 2.659e+00 0.000 1.000000   
## CountryMOZ -5.226e-15 1.938e+00 0.000 1.000000   
## CountryMLI -1.878e-15 8.999e-01 0.000 1.000000   
## CountryKEN 4.388e+00 9.970e-01 4.402 2.11e-05 \*\*\*  
## CountryETH 6.500e-01 2.659e+00 0.244 0.807206   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.6500 2.5742 0.253 0.8010   
## CountryGUI -0.6500 2.6586 -0.244 0.8072   
## CountryGHA -0.6500 2.6447 -0.246 0.8062   
## CountryBKF -0.5488 2.6039 -0.211 0.8334   
## CountryZIM 1.0300 2.6998 0.382 0.7034   
## CountryZAM 6.8800 3.6404 1.890 0.0608 .  
## CountrySAF -0.1950 2.7303 -0.071 0.9432   
## CountryUGA -0.4380 2.8199 -0.155 0.8768   
## CountryURT 4.0133 2.7804 1.443 0.1511   
## CountrySWA -0.6500 3.6404 -0.179 0.8585   
## CountrySEN -0.6500 2.6586 -0.244 0.8072   
## CountryZAI -0.6500 3.6404 -0.179 0.8585   
## CountryMOZ -0.6500 3.1527 -0.206 0.8370   
## CountryMLI -0.6500 2.6447 -0.246 0.8062   
## CountryKEN 3.7383 2.6793 1.395 0.1651   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.3883 0.7431 5.905 2.51e-08 \*\*\*  
## CountryETH -3.7383 2.6793 -1.395 0.16513   
## CountryGUI -4.3883 0.9970 -4.402 2.11e-05 \*\*\*  
## CountryGHA -4.3883 0.9593 -4.574 1.04e-05 \*\*\*  
## CountryBKF -4.2872 0.8404 -5.101 1.07e-06 \*\*\*  
## CountryZIM -2.7083 1.1022 -2.457 0.01522 \*   
## CountryZAM 3.1417 2.6793 1.173 0.24294   
## CountrySAF -3.9333 1.1749 -3.348 0.00105 \*\*   
## CountryUGA -4.1763 1.3702 -3.048 0.00275 \*\*   
## CountryURT 0.2750 1.2871 0.214 0.83112   
## CountrySWA -4.3883 2.6793 -1.638 0.10368   
## CountrySEN -4.3883 0.9970 -4.402 2.11e-05 \*\*\*  
## CountryZAI -4.3883 2.6793 -1.638 0.10368   
## CountryMOZ -4.3883 1.9661 -2.232 0.02719 \*   
## CountryMLI -4.3883 0.9593 -4.574 1.04e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.089e-16 6.326e-01 0.000 1.000   
## CountryKEN 3.342e-01 1.000e+00 0.334 0.739   
## CountryETH 1.768e-15 2.758e+00 0.000 1.000   
## CountryGUI -6.666e-16 9.384e-01 0.000 1.000   
## CountryGHA 3.789e+00 8.947e-01 4.235 4.09e-05 \*\*\*  
## CountryBKF 3.586e-01 7.535e-01 0.476 0.635   
## CountryZIM -5.254e-16 1.059e+00 0.000 1.000   
## CountryZAM -6.858e-16 2.758e+00 0.000 1.000   
## CountrySAF -1.921e-16 1.141e+00 0.000 1.000   
## CountryUGA -8.262e-16 1.357e+00 0.000 1.000   
## CountryURT 2.350e-01 1.265e+00 0.186 0.853   
## CountrySWA -1.292e-15 2.758e+00 0.000 1.000   
## CountrySEN -9.176e-16 9.384e-01 0.000 1.000   
## CountryZAI -1.251e-16 2.758e+00 0.000 1.000   
## CountryMOZ -1.138e-16 2.001e+00 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.047e-14 1.820e+00 0.000 1.0000   
## CountryMLI 1.063e-14 1.919e+00 0.000 1.0000   
## CountryKEN 4.388e+00 1.966e+00 2.232 0.0272 \*  
## CountryETH 6.500e-01 3.153e+00 0.206 0.8370   
## CountryGUI -5.284e-15 1.938e+00 0.000 1.0000   
## CountryGHA 1.360e-14 1.919e+00 0.000 1.0000   
## CountryBKF 1.012e-01 1.862e+00 0.054 0.9568   
## CountryZIM 1.680e+00 1.994e+00 0.843 0.4009   
## CountryZAM 7.530e+00 3.153e+00 2.388 0.0182 \*  
## CountrySAF 4.550e-01 2.035e+00 0.224 0.8234   
## CountryUGA 2.120e-01 2.154e+00 0.098 0.9217   
## CountryURT 4.663e+00 2.102e+00 2.219 0.0281 \*  
## CountrySWA 1.073e-14 3.153e+00 0.000 1.0000   
## CountrySEN 1.232e-14 1.938e+00 0.000 1.0000   
## CountryZAI 3.263e-15 3.153e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.621e-14 2.574e+00 0.000 1.0000   
## CountryMOZ -2.354e-14 3.153e+00 0.000 1.0000   
## CountryMLI -2.361e-14 2.645e+00 0.000 1.0000   
## CountryKEN 4.388e+00 2.679e+00 1.638 0.1037   
## CountryETH 6.500e-01 3.640e+00 0.179 0.8585   
## CountryGUI -3.327e-14 2.659e+00 0.000 1.0000   
## CountryGHA -2.543e-14 2.645e+00 0.000 1.0000   
## CountryBKF 1.012e-01 2.604e+00 0.039 0.9691   
## CountryZIM 1.680e+00 2.700e+00 0.622 0.5348   
## CountryZAM 7.530e+00 3.640e+00 2.068 0.0404 \*  
## CountrySAF 4.550e-01 2.730e+00 0.167 0.8679   
## CountryUGA 2.120e-01 2.820e+00 0.075 0.9402   
## CountryURT 4.663e+00 2.780e+00 1.677 0.0957 .  
## CountrySWA -2.526e-14 3.640e+00 0.000 1.0000   
## CountrySEN -3.073e-14 2.659e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -5.202e-15 6.646e-01 0.000 1.000000   
## CountryZAI 4.809e-15 2.659e+00 0.000 1.000000   
## CountryMOZ 3.179e-15 1.938e+00 0.000 1.000000   
## CountryMLI 3.176e-15 8.999e-01 0.000 1.000000   
## CountryKEN 4.388e+00 9.970e-01 4.402 2.11e-05 \*\*\*  
## CountryETH 6.500e-01 2.659e+00 0.244 0.807206   
## CountryGUI 4.652e-15 9.400e-01 0.000 1.000000   
## CountryGHA 1.110e-14 8.999e-01 0.000 1.000000   
## CountryBKF 1.012e-01 7.719e-01 0.131 0.895920   
## CountryZIM 1.680e+00 1.051e+00 1.599 0.112141   
## CountryZAM 7.530e+00 2.659e+00 2.832 0.005298 \*\*   
## CountrySAF 4.550e-01 1.127e+00 0.404 0.687016   
## CountryUGA 2.120e-01 1.329e+00 0.159 0.873517   
## CountryURT 4.663e+00 1.243e+00 3.750 0.000257 \*\*\*  
## CountrySWA 5.504e-15 2.659e+00 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.185e-14 2.574e+00 0.000 1.0000   
## CountrySEN -3.144e-14 2.659e+00 0.000 1.0000   
## CountryZAI -3.168e-14 3.640e+00 0.000 1.0000   
## CountryMOZ -2.996e-14 3.153e+00 0.000 1.0000   
## CountryMLI -6.544e-14 2.645e+00 0.000 1.0000   
## CountryKEN 4.388e+00 2.679e+00 1.638 0.1037   
## CountryETH 6.500e-01 3.640e+00 0.179 0.8585   
## CountryGUI -3.930e-14 2.659e+00 0.000 1.0000   
## CountryGHA -2.563e-14 2.645e+00 0.000 1.0000   
## CountryBKF 1.012e-01 2.604e+00 0.039 0.9691   
## CountryZIM 1.680e+00 2.700e+00 0.622 0.5348   
## CountryZAM 7.530e+00 3.640e+00 2.068 0.0404 \*  
## CountrySAF 4.550e-01 2.730e+00 0.167 0.8679   
## CountryUGA 2.120e-01 2.820e+00 0.075 0.9402   
## CountryURT 4.663e+00 2.780e+00 1.677 0.0957 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_TcTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -0.3586 0.0000 0.0000 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.23500 1.09577 0.214 0.83050   
## CountrySWA -0.23500 2.89915 -0.081 0.93551   
## CountrySEN -0.23500 1.29654 -0.181 0.85643   
## CountryZAI -0.23500 2.89915 -0.081 0.93551   
## CountryMOZ -0.23500 2.19155 -0.107 0.91476   
## CountryMLI -0.23500 1.26529 -0.186 0.85292   
## CountryKEN 0.09917 1.34204 0.074 0.94120   
## CountryETH -0.23500 2.89915 -0.081 0.93551   
## CountryGUI -0.23500 1.29654 -0.181 0.85643   
## CountryGHA 3.55444 1.26529 2.809 0.00567 \*\*  
## CountryBKF 0.12360 1.16973 0.106 0.91599   
## CountryZIM -0.23500 1.38606 -0.170 0.86561   
## CountryZAM -0.23500 2.89915 -0.081 0.93551   
## CountrySAF -0.23500 1.44957 -0.162 0.87145   
## CountryUGA -0.23500 1.62530 -0.145 0.88524   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.204325)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1015.8 on 141 degrees of freedom  
## AIC: 766.99  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.2120 1.1512 0.184 0.85416   
## CountryURT 4.4513 1.5587 2.856 0.00494 \*\*  
## CountrySWA -0.2120 2.8199 -0.075 0.94018   
## CountrySEN -0.2120 1.3293 -0.159 0.87352   
## CountryZAI -0.2120 2.8199 -0.075 0.94018   
## CountryMOZ -0.2120 2.1537 -0.098 0.92173   
## CountryMLI -0.2120 1.3013 -0.163 0.87082   
## CountryKEN 4.1763 1.3702 3.048 0.00275 \*\*  
## CountryETH 0.4380 2.8199 0.155 0.87679   
## CountryGUI -0.2120 1.3293 -0.159 0.87352   
## CountryGHA -0.2120 1.3013 -0.163 0.87082   
## CountryBKF -0.1108 1.2163 -0.091 0.92752   
## CountryZIM 1.4680 1.4099 1.041 0.29957   
## CountryZAM 7.3180 2.8199 2.595 0.01045 \*   
## CountrySAF 0.2430 1.4675 0.166 0.86872   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.4550 0.9101 0.500 0.61790   
## CountryUGA -0.2430 1.4675 -0.166 0.86872   
## CountryURT 4.2083 1.3902 3.027 0.00294 \*\*  
## CountrySWA -0.4550 2.7303 -0.167 0.86789   
## CountrySEN -0.4550 1.1270 -0.404 0.68702   
## CountryZAI -0.4550 2.7303 -0.167 0.86789   
## CountryMOZ -0.4550 2.0351 -0.224 0.82341   
## CountryMLI -0.4550 1.0938 -0.416 0.67806   
## CountryKEN 3.9333 1.1749 3.348 0.00105 \*\*  
## CountryETH 0.1950 2.7303 0.071 0.94316   
## CountryGUI -0.4550 1.1270 -0.404 0.68702   
## CountryGHA -0.4550 1.0938 -0.416 0.67806   
## CountryBKF -0.3538 0.9912 -0.357 0.72163   
## CountryZIM 1.2250 1.2210 1.003 0.31746   
## CountryZAM 7.0750 2.7303 2.591 0.01057 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.530 2.574 2.925 0.00401 \*\*  
## CountrySAF -7.075 2.730 -2.591 0.01057 \*   
## CountryUGA -7.318 2.820 -2.595 0.01045 \*   
## CountryURT -2.867 2.780 -1.031 0.30430   
## CountrySWA -7.530 3.640 -2.068 0.04043 \*   
## CountrySEN -7.530 2.659 -2.832 0.00530 \*\*  
## CountryZAI -7.530 3.640 -2.068 0.04043 \*   
## CountryMOZ -7.530 3.153 -2.388 0.01824 \*   
## CountryMLI -7.530 2.645 -2.847 0.00507 \*\*  
## CountryKEN -3.142 2.679 -1.173 0.24294   
## CountryETH -6.880 3.640 -1.890 0.06083 .   
## CountryGUI -7.530 2.659 -2.832 0.00530 \*\*  
## CountryGHA -7.530 2.645 -2.847 0.00507 \*\*  
## CountryBKF -7.429 2.604 -2.853 0.00498 \*\*  
## CountryZIM -5.850 2.700 -2.167 0.03193 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.6633 -0.1012 0.0000 0.0000 16.4667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.6800 0.8140 2.064 0.0409 \*  
## CountryZAM 5.8500 2.6998 2.167 0.0319 \*  
## CountrySAF -1.2250 1.2210 -1.003 0.3175   
## CountryUGA -1.4680 1.4099 -1.041 0.2996   
## CountryURT 2.9833 1.3293 2.244 0.0264 \*  
## CountrySWA -1.6800 2.6998 -0.622 0.5348   
## CountrySEN -1.6800 1.0509 -1.599 0.1121   
## CountryZAI -1.6800 2.6998 -0.622 0.5348   
## CountryMOZ -1.6800 1.9939 -0.843 0.4009   
## CountryMLI -1.6800 1.0153 -1.655 0.1002   
## CountryKEN 2.7083 1.1022 2.457 0.0152 \*  
## CountryETH -1.0300 2.6998 -0.382 0.7034   
## CountryGUI -1.6800 1.0509 -1.599 0.1121   
## CountryGHA -1.6800 1.0153 -1.655 0.1002   
## CountryBKF -1.5788 0.9037 -1.747 0.0828 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.626342)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 934.31 on 141 degrees of freedom  
## AIC: 753.94  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TvTz per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.4800 1.3507 0.355 0.723   
## CountryZIM -0.4800 3.1096 -0.154 0.878   
## CountryZAM -0.4800 8.9598 -0.054 0.957   
## CountrySAF -0.4800 3.4105 -0.141 0.888   
## CountryUGA -0.4800 4.1851 -0.115 0.909   
## CountryURT -0.2450 3.8601 -0.063 0.949   
## CountrySWA -0.4800 8.9598 -0.054 0.957   
## CountrySEN 1.0333 2.6561 0.389 0.698   
## CountryZAI -0.4800 8.9598 -0.054 0.957   
## CountryMOZ -0.4800 6.4071 -0.075 0.940   
## CountryMLI -0.4800 2.4866 -0.193 0.847   
## CountryKEN -0.3942 2.8918 -0.136 0.892   
## CountryETH -0.4800 8.9598 -0.054 0.957   
## CountryGUI -0.4800 2.6561 -0.181 0.857   
## CountryGHA 12.9139 2.4866 5.193 7.08e-07 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 13.394 2.088 6.416 1.98e-09 \*\*\*  
## CountryBKF -12.914 2.487 -5.193 7.08e-07 \*\*\*  
## CountryZIM -13.394 3.493 -3.834 0.000189 \*\*\*  
## CountryZAM -13.394 9.100 -1.472 0.143293   
## CountrySAF -13.394 3.764 -3.559 0.000508 \*\*\*  
## CountryUGA -13.394 4.478 -2.991 0.003280 \*\*   
## CountryURT -13.159 4.175 -3.152 0.001984 \*\*   
## CountrySWA -13.394 9.100 -1.472 0.143293   
## CountrySEN -11.881 3.097 -3.837 0.000188 \*\*\*  
## CountryZAI -13.394 9.100 -1.472 0.143293   
## CountryMOZ -13.394 6.602 -2.029 0.044362 \*   
## CountryMLI -13.394 2.952 -4.537 1.21e-05 \*\*\*  
## CountryKEN -13.308 3.301 -4.032 9.03e-05 \*\*\*  
## CountryETH -13.394 9.100 -1.472 0.143293   
## CountryGUI -13.394 3.097 -4.325 2.86e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.991e-15 2.287e+00 0.000 1.000   
## CountryGHA 1.339e+01 3.097e+00 4.325 2.86e-05 \*\*\*  
## CountryBKF 4.800e-01 2.656e+00 0.181 0.857   
## CountryZIM -9.384e-16 3.616e+00 0.000 1.000   
## CountryZAM -9.099e-16 9.148e+00 0.000 1.000   
## CountrySAF -1.854e-15 3.878e+00 0.000 1.000   
## CountryUGA -2.235e-15 4.574e+00 0.000 1.000   
## CountryURT 2.350e-01 4.279e+00 0.055 0.956   
## CountrySWA -2.238e-16 9.148e+00 0.000 1.000   
## CountrySEN 1.513e+00 3.234e+00 0.468 0.641   
## CountryZAI -1.418e-15 9.148e+00 0.000 1.000   
## CountryMOZ -1.136e-15 6.668e+00 0.000 1.000   
## CountryMLI -1.794e-15 3.097e+00 0.000 1.000   
## CountryKEN 8.583e-02 3.430e+00 0.025 0.980   
## CountryETH -2.236e-15 9.148e+00 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 9.020e-15 8.857e+00 0.000 1.000  
## CountryGUI -5.066e-15 9.148e+00 0.000 1.000  
## CountryGHA 1.339e+01 9.100e+00 1.472 0.143  
## CountryBKF 4.800e-01 8.960e+00 0.054 0.957  
## CountryZIM -9.356e-15 9.290e+00 0.000 1.000  
## CountryZAM -9.787e-15 1.253e+01 0.000 1.000  
## CountrySAF -1.187e-14 9.395e+00 0.000 1.000  
## CountryUGA -1.089e-14 9.703e+00 0.000 1.000  
## CountryURT 2.350e-01 9.567e+00 0.025 0.980  
## CountrySWA -9.925e-15 1.253e+01 0.000 1.000  
## CountrySEN 1.513e+00 9.148e+00 0.165 0.869  
## CountryZAI -9.733e-15 1.253e+01 0.000 1.000  
## CountryMOZ -1.060e-14 1.085e+01 0.000 1.000  
## CountryMLI -9.415e-15 9.100e+00 0.000 1.000  
## CountryKEN 8.583e-02 9.219e+00 0.009 0.993  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.08583 2.55691 0.034 0.973   
## CountryETH -0.08583 9.21907 -0.009 0.993   
## CountryGUI -0.08583 3.43046 -0.025 0.980   
## CountryGHA 13.30806 3.30096 4.032 9.03e-05 \*\*\*  
## CountryBKF 0.39417 2.89176 0.136 0.892   
## CountryZIM -0.08583 3.79251 -0.023 0.982   
## CountryZAM -0.08583 9.21907 -0.009 0.993   
## CountrySAF -0.08583 4.04283 -0.021 0.983   
## CountryUGA -0.08583 4.71471 -0.018 0.986   
## CountryURT 0.14917 4.42870 0.034 0.973   
## CountrySWA -0.08583 9.21907 -0.009 0.993   
## CountrySEN 1.42750 3.43046 0.416 0.678   
## CountryZAI -0.08583 9.21907 -0.009 0.993   
## CountryMOZ -0.08583 6.76495 -0.013 0.990   
## CountryMLI -0.08583 3.30096 -0.026 0.979   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.044e-16 2.088e+00 0.000 1.000   
## CountryKEN 8.583e-02 3.301e+00 0.026 0.979   
## CountryETH 2.829e-14 9.100e+00 0.000 1.000   
## CountryGUI -4.363e-15 3.097e+00 0.000 1.000   
## CountryGHA 1.339e+01 2.952e+00 4.537 1.21e-05 \*\*\*  
## CountryBKF 4.800e-01 2.487e+00 0.193 0.847   
## CountryZIM 1.089e-15 3.493e+00 0.000 1.000   
## CountryZAM -1.762e-15 9.100e+00 0.000 1.000   
## CountrySAF 8.197e-16 3.764e+00 0.000 1.000   
## CountryUGA 1.967e-15 4.478e+00 0.000 1.000   
## CountryURT 2.350e-01 4.175e+00 0.056 0.955   
## CountrySWA 1.013e-15 9.100e+00 0.000 1.000   
## CountrySEN 1.513e+00 3.097e+00 0.489 0.626   
## CountryZAI 5.999e-16 9.100e+00 0.000 1.000   
## CountryMOZ 3.103e-16 6.602e+00 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.569e-15 6.263e+00 0.000 1.0000   
## CountryMLI -1.635e-15 6.602e+00 0.000 1.0000   
## CountryKEN 8.583e-02 6.765e+00 0.013 0.9899   
## CountryETH -2.195e-14 1.085e+01 0.000 1.0000   
## CountryGUI -8.312e-15 6.668e+00 0.000 1.0000   
## CountryGHA 1.339e+01 6.602e+00 2.029 0.0444 \*  
## CountryBKF 4.800e-01 6.407e+00 0.075 0.9404   
## CountryZIM -3.063e-15 6.861e+00 0.000 1.0000   
## CountryZAM -4.752e-15 1.085e+01 0.000 1.0000   
## CountrySAF -3.912e-15 7.002e+00 0.000 1.0000   
## CountryUGA -5.976e-15 7.411e+00 0.000 1.0000   
## CountryURT 2.350e-01 7.232e+00 0.032 0.9741   
## CountrySWA -3.878e-15 1.085e+01 0.000 1.0000   
## CountrySEN 1.513e+00 6.668e+00 0.227 0.8208   
## CountryZAI -4.147e-15 1.085e+01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.867e-14 8.857e+00 0.000 1.000  
## CountryMOZ -1.760e-14 1.085e+01 0.000 1.000  
## CountryMLI -1.961e-14 9.100e+00 0.000 1.000  
## CountryKEN 8.583e-02 9.219e+00 0.009 0.993  
## CountryETH -1.037e-14 1.253e+01 0.000 1.000  
## CountryGUI -1.371e-14 9.148e+00 0.000 1.000  
## CountryGHA 1.339e+01 9.100e+00 1.472 0.143  
## CountryBKF 4.800e-01 8.960e+00 0.054 0.957  
## CountryZIM -1.942e-14 9.290e+00 0.000 1.000  
## CountryZAM -2.245e-14 1.253e+01 0.000 1.000  
## CountrySAF -2.159e-14 9.395e+00 0.000 1.000  
## CountryUGA -2.163e-14 9.703e+00 0.000 1.000  
## CountryURT 2.350e-01 9.567e+00 0.025 0.980  
## CountrySWA -2.266e-14 1.253e+01 0.000 1.000  
## CountrySEN 1.513e+00 9.148e+00 0.165 0.869  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.513 2.287 0.662 0.509231   
## CountryZAI -1.513 9.148 -0.165 0.868843   
## CountryMOZ -1.513 6.668 -0.227 0.820777   
## CountryMLI -1.513 3.097 -0.489 0.625805   
## CountryKEN -1.427 3.430 -0.416 0.677951   
## CountryETH -1.513 9.148 -0.165 0.868843   
## CountryGUI -1.513 3.234 -0.468 0.640574   
## CountryGHA 11.881 3.097 3.837 0.000188 \*\*\*  
## CountryBKF -1.033 2.656 -0.389 0.697830   
## CountryZIM -1.513 3.616 -0.419 0.676212   
## CountryZAM -1.513 9.148 -0.165 0.868843   
## CountrySAF -1.513 3.878 -0.390 0.696932   
## CountryUGA -1.513 4.574 -0.331 0.741241   
## CountryURT -1.278 4.279 -0.299 0.765549   
## CountrySWA -1.513 9.148 -0.165 0.868843   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.476e-15 8.857e+00 0.000 1.000  
## CountrySEN 1.513e+00 9.148e+00 0.165 0.869  
## CountryZAI -4.630e-15 1.253e+01 0.000 1.000  
## CountryMOZ -1.373e-15 1.085e+01 0.000 1.000  
## CountryMLI 3.087e-16 9.100e+00 0.000 1.000  
## CountryKEN 8.583e-02 9.219e+00 0.009 0.993  
## CountryETH 4.353e-15 1.253e+01 0.000 1.000  
## CountryGUI -3.957e-15 9.148e+00 0.000 1.000  
## CountryGHA 1.339e+01 9.100e+00 1.472 0.143  
## CountryBKF 4.800e-01 8.960e+00 0.054 0.957  
## CountryZIM -2.172e-15 9.290e+00 0.000 1.000  
## CountryZAM 7.878e-15 1.253e+01 0.000 1.000  
## CountrySAF -6.047e-16 9.395e+00 0.000 1.000  
## CountryUGA -3.640e-15 9.703e+00 0.000 1.000  
## CountryURT 2.350e-01 9.567e+00 0.025 0.980  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.2350 3.6160 0.065 0.94828   
## CountrySWA -0.2350 9.5671 -0.025 0.98044   
## CountrySEN 1.2783 4.2785 0.299 0.76555   
## CountryZAI -0.2350 9.5671 -0.025 0.98044   
## CountryMOZ -0.2350 7.2320 -0.032 0.97412   
## CountryMLI -0.2350 4.1754 -0.056 0.95520   
## CountryKEN -0.1492 4.4287 -0.034 0.97318   
## CountryETH -0.2350 9.5671 -0.025 0.98044   
## CountryGUI -0.2350 4.2785 -0.055 0.95628   
## CountryGHA 13.1589 4.1754 3.152 0.00198 \*\*  
## CountryBKF 0.2450 3.8601 0.063 0.94948   
## CountryZIM -0.2350 4.5739 -0.051 0.95910   
## CountryZAM -0.2350 9.5671 -0.025 0.98044   
## CountrySAF -0.2350 4.7835 -0.049 0.96089   
## CountryUGA -0.2350 5.3634 -0.044 0.96511   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.677e-15 3.961e+00 0.000 1.00000   
## CountryURT 2.350e-01 5.363e+00 0.044 0.96511   
## CountrySWA -4.985e-15 9.703e+00 0.000 1.00000   
## CountrySEN 1.513e+00 4.574e+00 0.331 0.74124   
## CountryZAI -7.804e-15 9.703e+00 0.000 1.00000   
## CountryMOZ -7.172e-15 7.411e+00 0.000 1.00000   
## CountryMLI -8.049e-15 4.478e+00 0.000 1.00000   
## CountryKEN 8.583e-02 4.715e+00 0.018 0.98550   
## CountryETH -2.382e-15 9.703e+00 0.000 1.00000   
## CountryGUI -3.980e-15 4.574e+00 0.000 1.00000   
## CountryGHA 1.339e+01 4.478e+00 2.991 0.00328 \*\*  
## CountryBKF 4.800e-01 4.185e+00 0.115 0.90885   
## CountryZIM -5.103e-15 4.851e+00 0.000 1.00000   
## CountryZAM 3.876e-15 9.703e+00 0.000 1.00000   
## CountrySAF -3.623e-15 5.049e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.565e-15 3.132e+00 0.000 1.000000   
## CountryUGA 1.221e-15 5.049e+00 0.000 1.000000   
## CountryURT 2.350e-01 4.784e+00 0.049 0.960888   
## CountrySWA 6.406e-16 9.395e+00 0.000 1.000000   
## CountrySEN 1.513e+00 3.878e+00 0.390 0.696932   
## CountryZAI 3.824e-15 9.395e+00 0.000 1.000000   
## CountryMOZ -1.667e-16 7.002e+00 0.000 1.000000   
## CountryMLI -2.586e-15 3.764e+00 0.000 1.000000   
## CountryKEN 8.583e-02 4.043e+00 0.021 0.983091   
## CountryETH 1.305e-14 9.395e+00 0.000 1.000000   
## CountryGUI 3.499e-15 3.878e+00 0.000 1.000000   
## CountryGHA 1.339e+01 3.764e+00 3.559 0.000508 \*\*\*  
## CountryBKF 4.800e-01 3.410e+00 0.141 0.888273   
## CountryZIM -2.427e-15 4.201e+00 0.000 1.000000   
## CountryZAM 3.179e-15 9.395e+00 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 3.835e-14 8.857e+00 0.000 1.000  
## CountrySAF -3.678e-14 9.395e+00 0.000 1.000  
## CountryUGA -3.386e-14 9.703e+00 0.000 1.000  
## CountryURT 2.350e-01 9.567e+00 0.025 0.980  
## CountrySWA -3.875e-14 1.253e+01 0.000 1.000  
## CountrySEN 1.513e+00 9.148e+00 0.165 0.869  
## CountryZAI -4.028e-14 1.253e+01 0.000 1.000  
## CountryMOZ -4.177e-14 1.085e+01 0.000 1.000  
## CountryMLI -3.875e-14 9.100e+00 0.000 1.000  
## CountryKEN 8.583e-02 9.219e+00 0.009 0.993  
## CountryETH -4.546e-14 1.253e+01 0.000 1.000  
## CountryGUI -3.832e-14 9.148e+00 0.000 1.000  
## CountryGHA 1.339e+01 9.100e+00 1.472 0.143  
## CountryBKF 4.800e-01 8.960e+00 0.054 0.957  
## CountryZIM -3.656e-14 9.290e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_TvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -0.480 -0.086 0.000 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.951e-16 2.801e+00 0.000 1.000000   
## CountryZAM -6.294e-15 9.290e+00 0.000 1.000000   
## CountrySAF -5.800e-16 4.201e+00 0.000 1.000000   
## CountryUGA 1.167e-15 4.851e+00 0.000 1.000000   
## CountryURT 2.350e-01 4.574e+00 0.051 0.959097   
## CountrySWA 1.059e-15 9.290e+00 0.000 1.000000   
## CountrySEN 1.513e+00 3.616e+00 0.419 0.676212   
## CountryZAI -5.622e-15 9.290e+00 0.000 1.000000   
## CountryMOZ 4.382e-15 6.861e+00 0.000 1.000000   
## CountryMLI -1.316e-16 3.493e+00 0.000 1.000000   
## CountryKEN 8.583e-02 3.793e+00 0.023 0.981976   
## CountryETH -8.040e-15 9.290e+00 0.000 1.000000   
## CountryGUI 0.000e+00 3.616e+00 0.000 1.000000   
## CountryGHA 1.339e+01 3.493e+00 3.834 0.000189 \*\*\*  
## CountryBKF 4.800e-01 3.110e+00 0.154 0.877548   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 78.45348)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 11062 on 141 degrees of freedom  
## AIC: 1139.5  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TvTsg per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.536 1.141 5.729 5.87e-08 \*\*\*  
## CountryZIM -6.536 2.626 -2.489 0.01399 \*   
## CountryZAM -6.536 7.567 -0.864 0.38921   
## CountrySAF -6.536 2.880 -2.269 0.02478 \*   
## CountryUGA -6.536 3.535 -1.849 0.06654 .   
## CountryURT -5.394 3.260 -1.655 0.10022   
## CountrySWA -6.536 7.567 -0.864 0.38921   
## CountrySEN -6.536 2.243 -2.914 0.00416 \*\*   
## CountryZAI -6.536 7.567 -0.864 0.38921   
## CountryMOZ -5.536 5.411 -1.023 0.30804   
## CountryMLI -6.536 2.100 -3.112 0.00225 \*\*   
## CountryKEN -6.432 2.442 -2.633 0.00940 \*\*   
## CountryETH -6.096 7.567 -0.806 0.42185   
## CountryGUI -6.536 2.243 -2.914 0.00416 \*\*   
## CountryGHA -6.536 2.100 -3.112 0.00225 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.413e-15 1.763e+00 0.000 1.00000   
## CountryBKF 6.536e+00 2.100e+00 3.112 0.00225 \*\*  
## CountryZIM -6.966e-15 2.951e+00 0.000 1.00000   
## CountryZAM -4.867e-15 7.686e+00 0.000 1.00000   
## CountrySAF -4.669e-15 3.179e+00 0.000 1.00000   
## CountryUGA -4.758e-15 3.782e+00 0.000 1.00000   
## CountryURT 1.142e+00 3.527e+00 0.324 0.74662   
## CountrySWA -9.123e-15 7.686e+00 0.000 1.00000   
## CountrySEN -5.532e-15 2.615e+00 0.000 1.00000   
## CountryZAI -3.625e-14 7.686e+00 0.000 1.00000   
## CountryMOZ 1.000e+00 5.576e+00 0.179 0.85793   
## CountryMLI -6.984e-15 2.494e+00 0.000 1.00000   
## CountryKEN 1.042e-01 2.788e+00 0.037 0.97025   
## CountryETH 4.400e-01 7.686e+00 0.057 0.95443   
## CountryGUI -5.822e-15 2.615e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.635e-15 1.932e+00 0.000 1.00000   
## CountryGHA -3.116e-15 2.615e+00 0.000 1.00000   
## CountryBKF 6.536e+00 2.243e+00 2.914 0.00416 \*\*  
## CountryZIM -2.345e-15 3.054e+00 0.000 1.00000   
## CountryZAM -2.158e-15 7.726e+00 0.000 1.00000   
## CountrySAF -1.999e-15 3.275e+00 0.000 1.00000   
## CountryUGA -3.262e-15 3.863e+00 0.000 1.00000   
## CountryURT 1.142e+00 3.614e+00 0.316 0.75252   
## CountrySWA -5.779e-15 7.726e+00 0.000 1.00000   
## CountrySEN -3.424e-15 2.732e+00 0.000 1.00000   
## CountryZAI 1.445e-14 7.726e+00 0.000 1.00000   
## CountryMOZ 1.000e+00 5.631e+00 0.178 0.85931   
## CountryMLI 5.031e-16 2.615e+00 0.000 1.00000   
## CountryKEN 1.042e-01 2.897e+00 0.036 0.97137   
## CountryETH 4.400e-01 7.726e+00 0.057 0.95467   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.4400 7.4809 0.059 0.953  
## CountryGUI -0.4400 7.7262 -0.057 0.955  
## CountryGHA -0.4400 7.6859 -0.057 0.954  
## CountryBKF 6.0960 7.5674 0.806 0.422  
## CountryZIM -0.4400 7.8460 -0.056 0.955  
## CountryZAM -0.4400 10.5796 -0.042 0.967  
## CountrySAF -0.4400 7.9347 -0.055 0.956  
## CountryUGA -0.4400 8.1949 -0.054 0.957  
## CountryURT 0.7017 8.0803 0.087 0.931  
## CountrySWA -0.4400 10.5796 -0.042 0.967  
## CountrySEN -0.4400 7.7262 -0.057 0.955  
## CountryZAI -0.4400 10.5796 -0.042 0.967  
## CountryMOZ 0.5600 9.1622 0.061 0.951  
## CountryMLI -0.4400 7.6859 -0.057 0.954  
## CountryKEN -0.3358 7.7864 -0.043 0.966  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1042 2.1595 0.048 0.9616   
## CountryETH 0.3358 7.7864 0.043 0.9657   
## CountryGUI -0.1042 2.8973 -0.036 0.9714   
## CountryGHA -0.1042 2.7880 -0.037 0.9702   
## CountryBKF 6.4319 2.4424 2.633 0.0094 \*\*  
## CountryZIM -0.1042 3.2031 -0.033 0.9741   
## CountryZAM -0.1042 7.7864 -0.013 0.9893   
## CountrySAF -0.1042 3.4145 -0.031 0.9757   
## CountryUGA -0.1042 3.9820 -0.026 0.9792   
## CountryURT 1.0375 3.7404 0.277 0.7819   
## CountrySWA -0.1042 7.7864 -0.013 0.9893   
## CountrySEN -0.1042 2.8973 -0.036 0.9714   
## CountryZAI -0.1042 7.7864 -0.013 0.9893   
## CountryMOZ 0.8958 5.7136 0.157 0.8756   
## CountryMLI -0.1042 2.7880 -0.037 0.9702   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.697e-15 1.763e+00 0.000 1.00000   
## CountryKEN 1.042e-01 2.788e+00 0.037 0.97025   
## CountryETH 4.400e-01 7.686e+00 0.057 0.95443   
## CountryGUI 6.453e-15 2.615e+00 0.000 1.00000   
## CountryGHA 4.517e-15 2.494e+00 0.000 1.00000   
## CountryBKF 6.536e+00 2.100e+00 3.112 0.00225 \*\*  
## CountryZIM 7.330e-15 2.951e+00 0.000 1.00000   
## CountryZAM 7.386e-15 7.686e+00 0.000 1.00000   
## CountrySAF 9.513e-15 3.179e+00 0.000 1.00000   
## CountryUGA 5.246e-15 3.782e+00 0.000 1.00000   
## CountryURT 1.142e+00 3.527e+00 0.324 0.74662   
## CountrySWA 5.182e-15 7.686e+00 0.000 1.00000   
## CountrySEN 5.356e-15 2.615e+00 0.000 1.00000   
## CountryZAI 5.674e-15 7.686e+00 0.000 1.00000   
## CountryMOZ 1.000e+00 5.576e+00 0.179 0.85793   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.0000 5.2898 0.189 0.850  
## CountryMLI -1.0000 5.5759 -0.179 0.858  
## CountryKEN -0.8958 5.7136 -0.157 0.876  
## CountryETH -0.5600 9.1622 -0.061 0.951  
## CountryGUI -1.0000 5.6314 -0.178 0.859  
## CountryGHA -1.0000 5.5759 -0.179 0.858  
## CountryBKF 5.5360 5.4114 1.023 0.308  
## CountryZIM -1.0000 5.7947 -0.173 0.863  
## CountryZAM -1.0000 9.1622 -0.109 0.913  
## CountrySAF -1.0000 5.9142 -0.169 0.866  
## CountryUGA -1.0000 6.2590 -0.160 0.873  
## CountryURT 0.1417 6.1081 0.023 0.982  
## CountrySWA -1.0000 9.1622 -0.109 0.913  
## CountrySEN -1.0000 5.6314 -0.178 0.859  
## CountryZAI -1.0000 9.1622 -0.109 0.913  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.801e-14 7.481e+00 0.000 1.000  
## CountryMOZ 1.000e+00 9.162e+00 0.109 0.913  
## CountryMLI -6.869e-14 7.686e+00 0.000 1.000  
## CountryKEN 1.042e-01 7.786e+00 0.013 0.989  
## CountryETH 4.400e-01 1.058e+01 0.042 0.967  
## CountryGUI -6.621e-14 7.726e+00 0.000 1.000  
## CountryGHA -6.834e-14 7.686e+00 0.000 1.000  
## CountryBKF 6.536e+00 7.567e+00 0.864 0.389  
## CountryZIM -6.617e-14 7.846e+00 0.000 1.000  
## CountryZAM -1.372e-13 1.058e+01 0.000 1.000  
## CountrySAF -6.079e-14 7.935e+00 0.000 1.000  
## CountryUGA -6.251e-14 8.195e+00 0.000 1.000  
## CountryURT 1.142e+00 8.080e+00 0.141 0.888  
## CountrySWA -6.557e-14 1.058e+01 0.000 1.000  
## CountrySEN -6.897e-14 7.726e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -5.635e-15 1.932e+00 0.000 1.00000   
## CountryZAI -4.202e-14 7.726e+00 0.000 1.00000   
## CountryMOZ 1.000e+00 5.631e+00 0.178 0.85931   
## CountryMLI 8.876e-15 2.615e+00 0.000 1.00000   
## CountryKEN 1.042e-01 2.897e+00 0.036 0.97137   
## CountryETH 4.400e-01 7.726e+00 0.057 0.95467   
## CountryGUI 7.783e-15 2.732e+00 0.000 1.00000   
## CountryGHA 5.509e-15 2.615e+00 0.000 1.00000   
## CountryBKF 6.536e+00 2.243e+00 2.914 0.00416 \*\*  
## CountryZIM 8.371e-15 3.054e+00 0.000 1.00000   
## CountryZAM -1.819e-14 7.726e+00 0.000 1.00000   
## CountrySAF 1.109e-16 3.275e+00 0.000 1.00000   
## CountryUGA 1.001e-14 3.863e+00 0.000 1.00000   
## CountryURT 1.142e+00 3.614e+00 0.316 0.75252   
## CountrySWA 5.275e-15 7.726e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 5.742e-14 7.481e+00 0.000 1.000  
## CountrySEN -4.577e-14 7.726e+00 0.000 1.000  
## CountryZAI -4.629e-14 1.058e+01 0.000 1.000  
## CountryMOZ 1.000e+00 9.162e+00 0.109 0.913  
## CountryMLI -5.995e-14 7.686e+00 0.000 1.000  
## CountryKEN 1.042e-01 7.786e+00 0.013 0.989  
## CountryETH 4.400e-01 1.058e+01 0.042 0.967  
## CountryGUI -5.630e-14 7.726e+00 0.000 1.000  
## CountryGHA -6.022e-14 7.686e+00 0.000 1.000  
## CountryBKF 6.536e+00 7.567e+00 0.864 0.389  
## CountryZIM -5.496e-14 7.846e+00 0.000 1.000  
## CountryZAM -5.324e-14 1.058e+01 0.000 1.000  
## CountrySAF -4.672e-14 7.935e+00 0.000 1.000  
## CountryUGA -5.084e-14 8.195e+00 0.000 1.000  
## CountryURT 1.142e+00 8.080e+00 0.141 0.888  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.1417 3.0541 0.374 0.709  
## CountrySWA -1.1417 8.0803 -0.141 0.888  
## CountrySEN -1.1417 3.6136 -0.316 0.753  
## CountryZAI -1.1417 8.0803 -0.141 0.888  
## CountryMOZ -0.1417 6.1081 -0.023 0.982  
## CountryMLI -1.1417 3.5265 -0.324 0.747  
## CountryKEN -1.0375 3.7404 -0.277 0.782  
## CountryETH -0.7017 8.0803 -0.087 0.931  
## CountryGUI -1.1417 3.6136 -0.316 0.753  
## CountryGHA -1.1417 3.5265 -0.324 0.747  
## CountryBKF 5.3944 3.2602 1.655 0.100  
## CountryZIM -1.1417 3.8631 -0.296 0.768  
## CountryZAM -1.1417 8.0803 -0.141 0.888  
## CountrySAF -1.1417 4.0401 -0.283 0.778  
## CountryUGA -1.1417 4.5299 -0.252 0.801  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.818e-14 3.346e+00 0.000 1.0000   
## CountryURT 1.142e+00 4.530e+00 0.252 0.8014   
## CountrySWA -2.422e-14 8.195e+00 0.000 1.0000   
## CountrySEN -2.735e-14 3.863e+00 0.000 1.0000   
## CountryZAI -3.795e-14 8.195e+00 0.000 1.0000   
## CountryMOZ 1.000e+00 6.259e+00 0.160 0.8733   
## CountryMLI -2.995e-14 3.782e+00 0.000 1.0000   
## CountryKEN 1.042e-01 3.982e+00 0.026 0.9792   
## CountryETH 4.400e-01 8.195e+00 0.054 0.9573   
## CountryGUI -2.101e-14 3.863e+00 0.000 1.0000   
## CountryGHA -2.641e-14 3.782e+00 0.000 1.0000   
## CountryBKF 6.536e+00 3.535e+00 1.849 0.0665 .  
## CountryZIM -2.864e-14 4.097e+00 0.000 1.0000   
## CountryZAM -1.832e-15 8.195e+00 0.000 1.0000   
## CountrySAF -2.544e-14 4.265e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.031e-15 2.645e+00 0.000 1.0000   
## CountryUGA 1.815e-14 4.265e+00 0.000 1.0000   
## CountryURT 1.142e+00 4.040e+00 0.283 0.7779   
## CountrySWA -1.675e-14 7.935e+00 0.000 1.0000   
## CountrySEN -5.181e-15 3.275e+00 0.000 1.0000   
## CountryZAI -4.942e-15 7.935e+00 0.000 1.0000   
## CountryMOZ 1.000e+00 5.914e+00 0.169 0.8660   
## CountryMLI -5.386e-15 3.179e+00 0.000 1.0000   
## CountryKEN 1.042e-01 3.415e+00 0.031 0.9757   
## CountryETH 4.400e-01 7.935e+00 0.055 0.9559   
## CountryGUI 8.498e-15 3.275e+00 0.000 1.0000   
## CountryGHA -6.658e-15 3.179e+00 0.000 1.0000   
## CountryBKF 6.536e+00 2.880e+00 2.269 0.0248 \*  
## CountryZIM -1.167e-14 3.548e+00 0.000 1.0000   
## CountryZAM -2.237e-15 7.935e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.302e-13 7.481e+00 0.000 1.000  
## CountrySAF -2.087e-13 7.935e+00 0.000 1.000  
## CountryUGA -2.168e-13 8.195e+00 0.000 1.000  
## CountryURT 1.142e+00 8.080e+00 0.141 0.888  
## CountrySWA -2.309e-13 1.058e+01 0.000 1.000  
## CountrySEN -2.346e-13 7.726e+00 0.000 1.000  
## CountryZAI -2.390e-13 1.058e+01 0.000 1.000  
## CountryMOZ 1.000e+00 9.162e+00 0.109 0.913  
## CountryMLI -2.276e-13 7.686e+00 0.000 1.000  
## CountryKEN 1.042e-01 7.786e+00 0.013 0.989  
## CountryETH 4.400e-01 1.058e+01 0.042 0.967  
## CountryGUI -2.317e-13 7.726e+00 0.000 1.000  
## CountryGHA -2.330e-13 7.686e+00 0.000 1.000  
## CountryBKF 6.536e+00 7.567e+00 0.864 0.389  
## CountryZIM -2.336e-13 7.846e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.773e-15 2.366e+00 0.000 1.000   
## CountryZAM -6.818e-14 7.846e+00 0.000 1.000   
## CountrySAF -1.283e-14 3.548e+00 0.000 1.000   
## CountryUGA -7.956e-16 4.097e+00 0.000 1.000   
## CountryURT 1.142e+00 3.863e+00 0.296 0.768   
## CountrySWA 7.575e-15 7.846e+00 0.000 1.000   
## CountrySEN 2.589e-15 3.054e+00 0.000 1.000   
## CountryZAI -2.430e-14 7.846e+00 0.000 1.000   
## CountryMOZ 1.000e+00 5.795e+00 0.173 0.863   
## CountryMLI 1.225e-14 2.951e+00 0.000 1.000   
## CountryKEN 1.042e-01 3.203e+00 0.033 0.974   
## CountryETH 4.400e-01 7.846e+00 0.056 0.955   
## CountryGUI -3.846e-15 3.054e+00 0.000 1.000   
## CountryGHA 8.723e-15 2.951e+00 0.000 1.000   
## CountryBKF 6.536e+00 2.626e+00 2.489 0.014 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TzTsg per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.8402 0.5987 3.074 0.00254 \*\*  
## CountryZIM -1.8402 1.3784 -1.335 0.18401   
## CountryZAM -1.8402 3.9716 -0.463 0.64383   
## CountrySAF -1.8402 1.5117 -1.217 0.22552   
## CountryUGA -1.8402 1.8551 -0.992 0.32291   
## CountryURT -1.2869 1.7110 -0.752 0.45323   
## CountrySWA -1.8402 3.9716 -0.463 0.64383   
## CountrySEN -1.8402 1.1773 -1.563 0.12029   
## CountryZAI -1.8402 3.9716 -0.463 0.64383   
## CountryMOZ -1.8402 2.8401 -0.648 0.51807   
## CountryMLI -1.8402 1.1022 -1.670 0.09722 .   
## CountryKEN -1.5652 1.2818 -1.221 0.22408   
## CountryETH -1.1902 3.9716 -0.300 0.76486   
## CountryGUI -1.8402 1.1773 -1.563 0.12029   
## CountryGHA -1.8402 1.1022 -1.670 0.09722 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.778e-15 9.254e-01 0.000 1.0000   
## CountryBKF 1.840e+00 1.102e+00 1.670 0.0972 .  
## CountryZIM 2.017e-15 1.549e+00 0.000 1.0000   
## CountryZAM -1.941e-15 4.034e+00 0.000 1.0000   
## CountrySAF -1.194e-15 1.668e+00 0.000 1.0000   
## CountryUGA -1.697e-15 1.985e+00 0.000 1.0000   
## CountryURT 5.533e-01 1.851e+00 0.299 0.7654   
## CountrySWA -2.506e-15 4.034e+00 0.000 1.0000   
## CountrySEN -1.966e-15 1.373e+00 0.000 1.0000   
## CountryZAI -1.072e-15 4.034e+00 0.000 1.0000   
## CountryMOZ 1.358e-16 2.926e+00 0.000 1.0000   
## CountryMLI -3.025e-15 1.309e+00 0.000 1.0000   
## CountryKEN 2.750e-01 1.463e+00 0.188 0.8512   
## CountryETH 6.500e-01 4.034e+00 0.161 0.8722   
## CountryGUI -1.650e-15 1.373e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 7.092e-16 1.014e+00 0.000 1.000  
## CountryGHA -2.448e-15 1.373e+00 0.000 1.000  
## CountryBKF 1.840e+00 1.177e+00 1.563 0.120  
## CountryZIM -2.792e-16 1.603e+00 0.000 1.000  
## CountryZAM -2.010e-16 4.055e+00 0.000 1.000  
## CountrySAF 7.995e-16 1.719e+00 0.000 1.000  
## CountryUGA -1.490e-15 2.027e+00 0.000 1.000  
## CountryURT 5.533e-01 1.897e+00 0.292 0.771  
## CountrySWA 1.732e-16 4.055e+00 0.000 1.000  
## CountrySEN 5.485e-16 1.434e+00 0.000 1.000  
## CountryZAI -1.067e-15 4.055e+00 0.000 1.000  
## CountryMOZ -8.111e-16 2.956e+00 0.000 1.000  
## CountryMLI -5.870e-16 1.373e+00 0.000 1.000  
## CountryKEN 2.750e-01 1.521e+00 0.181 0.857  
## CountryETH 6.500e-01 4.055e+00 0.160 0.873  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.65000 3.92618 0.166 0.869  
## CountryGUI -0.65000 4.05494 -0.160 0.873  
## CountryGHA -0.65000 4.03376 -0.161 0.872  
## CountryBKF 1.19023 3.97157 0.300 0.765  
## CountryZIM -0.65000 4.11781 -0.158 0.875  
## CountryZAM -0.65000 5.55245 -0.117 0.907  
## CountrySAF -0.65000 4.16434 -0.156 0.876  
## CountryUGA -0.65000 4.30091 -0.151 0.880  
## CountryURT -0.09667 4.24076 -0.023 0.982  
## CountrySWA -0.65000 5.55245 -0.117 0.907  
## CountrySEN -0.65000 4.05494 -0.160 0.873  
## CountryZAI -0.65000 5.55245 -0.117 0.907  
## CountryMOZ -0.65000 4.80856 -0.135 0.893  
## CountryMLI -0.65000 4.03376 -0.161 0.872  
## CountryKEN -0.37500 4.08649 -0.092 0.927  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.2750 1.1334 0.243 0.809  
## CountryETH 0.3750 4.0865 0.092 0.927  
## CountryGUI -0.2750 1.5206 -0.181 0.857  
## CountryGHA -0.2750 1.4632 -0.188 0.851  
## CountryBKF 1.5652 1.2818 1.221 0.224  
## CountryZIM -0.2750 1.6811 -0.164 0.870  
## CountryZAM -0.2750 4.0865 -0.067 0.946  
## CountrySAF -0.2750 1.7920 -0.153 0.878  
## CountryUGA -0.2750 2.0899 -0.132 0.895  
## CountryURT 0.2783 1.9631 0.142 0.887  
## CountrySWA -0.2750 4.0865 -0.067 0.946  
## CountrySEN -0.2750 1.5206 -0.181 0.857  
## CountryZAI -0.2750 4.0865 -0.067 0.946  
## CountryMOZ -0.2750 2.9987 -0.092 0.927  
## CountryMLI -0.2750 1.4632 -0.188 0.851  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.422e-15 9.254e-01 0.000 1.0000   
## CountryKEN 2.750e-01 1.463e+00 0.188 0.8512   
## CountryETH 6.500e-01 4.034e+00 0.161 0.8722   
## CountryGUI 1.545e-15 1.373e+00 0.000 1.0000   
## CountryGHA 2.371e-15 1.309e+00 0.000 1.0000   
## CountryBKF 1.840e+00 1.102e+00 1.670 0.0972 .  
## CountryZIM 3.755e-15 1.549e+00 0.000 1.0000   
## CountryZAM 4.329e-15 4.034e+00 0.000 1.0000   
## CountrySAF 4.636e-15 1.668e+00 0.000 1.0000   
## CountryUGA 5.233e-15 1.985e+00 0.000 1.0000   
## CountryURT 5.533e-01 1.851e+00 0.299 0.7654   
## CountrySWA 9.089e-15 4.034e+00 0.000 1.0000   
## CountrySEN 3.456e-15 1.373e+00 0.000 1.0000   
## CountryZAI 2.112e-15 4.034e+00 0.000 1.0000   
## CountryMOZ 2.917e-15 2.926e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.269e-14 2.776e+00 0.000 1.000  
## CountryMLI -1.437e-14 2.926e+00 0.000 1.000  
## CountryKEN 2.750e-01 2.999e+00 0.092 0.927  
## CountryETH 6.500e-01 4.809e+00 0.135 0.893  
## CountryGUI -1.277e-14 2.956e+00 0.000 1.000  
## CountryGHA -1.305e-14 2.926e+00 0.000 1.000  
## CountryBKF 1.840e+00 2.840e+00 0.648 0.518  
## CountryZIM -1.363e-14 3.041e+00 0.000 1.000  
## CountryZAM -1.476e-14 4.809e+00 0.000 1.000  
## CountrySAF -1.609e-14 3.104e+00 0.000 1.000  
## CountryUGA -1.091e-14 3.285e+00 0.000 1.000  
## CountryURT 5.533e-01 3.206e+00 0.173 0.863  
## CountrySWA -1.869e-14 4.809e+00 0.000 1.000  
## CountrySEN -1.246e-14 2.956e+00 0.000 1.000  
## CountryZAI -1.801e-14 4.809e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.000e-14 3.926e+00 0.000 1.000  
## CountryMOZ -1.951e-14 4.809e+00 0.000 1.000  
## CountryMLI -1.936e-14 4.034e+00 0.000 1.000  
## CountryKEN 2.750e-01 4.086e+00 0.067 0.946  
## CountryETH 6.500e-01 5.552e+00 0.117 0.907  
## CountryGUI -1.874e-14 4.055e+00 0.000 1.000  
## CountryGHA -1.995e-14 4.034e+00 0.000 1.000  
## CountryBKF 1.840e+00 3.972e+00 0.463 0.644  
## CountryZIM -1.938e-14 4.118e+00 0.000 1.000  
## CountryZAM -2.624e-14 5.552e+00 0.000 1.000  
## CountrySAF -2.148e-14 4.164e+00 0.000 1.000  
## CountryUGA -1.961e-14 4.301e+00 0.000 1.000  
## CountryURT 5.533e-01 4.241e+00 0.130 0.896  
## CountrySWA -1.228e-14 5.552e+00 0.000 1.000  
## CountrySEN -2.116e-14 4.055e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -6.083e-16 1.014e+00 0.000 1.000  
## CountryZAI -1.230e-14 4.055e+00 0.000 1.000  
## CountryMOZ -1.315e-15 2.956e+00 0.000 1.000  
## CountryMLI 3.622e-16 1.373e+00 0.000 1.000  
## CountryKEN 2.750e-01 1.521e+00 0.181 0.857  
## CountryETH 6.500e-01 4.055e+00 0.160 0.873  
## CountryGUI 1.186e-15 1.434e+00 0.000 1.000  
## CountryGHA -2.295e-16 1.373e+00 0.000 1.000  
## CountryBKF 1.840e+00 1.177e+00 1.563 0.120  
## CountryZIM 1.522e-15 1.603e+00 0.000 1.000  
## CountryZAM 1.966e-14 4.055e+00 0.000 1.000  
## CountrySAF 7.226e-17 1.719e+00 0.000 1.000  
## CountryUGA 2.200e-15 2.027e+00 0.000 1.000  
## CountryURT 5.533e-01 1.897e+00 0.292 0.771  
## CountrySWA 4.873e-16 4.055e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 7.209e-15 3.926e+00 0.000 1.000  
## CountrySEN -3.820e-15 4.055e+00 0.000 1.000  
## CountryZAI -1.170e-15 5.552e+00 0.000 1.000  
## CountryMOZ -8.393e-15 4.809e+00 0.000 1.000  
## CountryMLI -6.872e-15 4.034e+00 0.000 1.000  
## CountryKEN 2.750e-01 4.086e+00 0.067 0.946  
## CountryETH 6.500e-01 5.552e+00 0.117 0.907  
## CountryGUI -7.273e-15 4.055e+00 0.000 1.000  
## CountryGHA -7.470e-15 4.034e+00 0.000 1.000  
## CountryBKF 1.840e+00 3.972e+00 0.463 0.644  
## CountryZIM -5.062e-15 4.118e+00 0.000 1.000  
## CountryZAM -9.896e-16 5.552e+00 0.000 1.000  
## CountrySAF -6.557e-15 4.164e+00 0.000 1.000  
## CountryUGA -7.346e-15 4.301e+00 0.000 1.000  
## CountryURT 5.533e-01 4.241e+00 0.130 0.896  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.55333 1.60285 0.345 0.730  
## CountrySWA -0.55333 4.24076 -0.130 0.896  
## CountrySEN -0.55333 1.89652 -0.292 0.771  
## CountryZAI -0.55333 4.24076 -0.130 0.896  
## CountryMOZ -0.55333 3.20571 -0.173 0.863  
## CountryMLI -0.55333 1.85082 -0.299 0.765  
## CountryKEN -0.27833 1.96309 -0.142 0.887  
## CountryETH 0.09667 4.24076 0.023 0.982  
## CountryGUI -0.55333 1.89652 -0.292 0.771  
## CountryGHA -0.55333 1.85082 -0.299 0.765  
## CountryBKF 1.28690 1.71103 0.752 0.453  
## CountryZIM -0.55333 2.02747 -0.273 0.785  
## CountryZAM -0.55333 4.24076 -0.130 0.896  
## CountrySAF -0.55333 2.12038 -0.261 0.795  
## CountryUGA -0.55333 2.37742 -0.233 0.816  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -6.536 -0.104 0.000 0.000 60.134   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.818e-14 3.346e+00 0.000 1.0000   
## CountryURT 1.142e+00 4.530e+00 0.252 0.8014   
## CountrySWA -2.422e-14 8.195e+00 0.000 1.0000   
## CountrySEN -2.735e-14 3.863e+00 0.000 1.0000   
## CountryZAI -3.795e-14 8.195e+00 0.000 1.0000   
## CountryMOZ 1.000e+00 6.259e+00 0.160 0.8733   
## CountryMLI -2.995e-14 3.782e+00 0.000 1.0000   
## CountryKEN 1.042e-01 3.982e+00 0.026 0.9792   
## CountryETH 4.400e-01 8.195e+00 0.054 0.9573   
## CountryGUI -2.101e-14 3.863e+00 0.000 1.0000   
## CountryGHA -2.641e-14 3.782e+00 0.000 1.0000   
## CountryBKF 6.536e+00 3.535e+00 1.849 0.0665 .  
## CountryZIM -2.864e-14 4.097e+00 0.000 1.0000   
## CountryZAM -1.832e-15 8.195e+00 0.000 1.0000   
## CountrySAF -2.544e-14 4.265e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 55.96374)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 7890.9 on 141 degrees of freedom  
## AIC: 1086.8  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.767e-15 1.388e+00 0.000 1.000  
## CountryUGA 4.078e-15 2.238e+00 0.000 1.000  
## CountryURT 5.533e-01 2.120e+00 0.261 0.795  
## CountrySWA -1.592e-15 4.164e+00 0.000 1.000  
## CountrySEN -2.276e-15 1.719e+00 0.000 1.000  
## CountryZAI -2.811e-15 4.164e+00 0.000 1.000  
## CountryMOZ -2.264e-15 3.104e+00 0.000 1.000  
## CountryMLI -2.798e-15 1.668e+00 0.000 1.000  
## CountryKEN 2.750e-01 1.792e+00 0.153 0.878  
## CountryETH 6.500e-01 4.164e+00 0.156 0.876  
## CountryGUI 1.786e-15 1.719e+00 0.000 1.000  
## CountryGHA -2.616e-15 1.668e+00 0.000 1.000  
## CountryBKF 1.840e+00 1.512e+00 1.217 0.226  
## CountryZIM -2.458e-15 1.862e+00 0.000 1.000  
## CountryZAM -1.001e-15 4.164e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 7.322e-14 3.926e+00 0.000 1.000  
## CountrySAF -6.585e-14 4.164e+00 0.000 1.000  
## CountryUGA -6.922e-14 4.301e+00 0.000 1.000  
## CountryURT 5.533e-01 4.241e+00 0.130 0.896  
## CountrySWA -7.408e-14 5.552e+00 0.000 1.000  
## CountrySEN -7.498e-14 4.055e+00 0.000 1.000  
## CountryZAI -7.563e-14 5.552e+00 0.000 1.000  
## CountryMOZ -7.351e-14 4.809e+00 0.000 1.000  
## CountryMLI -7.260e-14 4.034e+00 0.000 1.000  
## CountryKEN 2.750e-01 4.086e+00 0.067 0.946  
## CountryETH 6.500e-01 5.552e+00 0.117 0.907  
## CountryGUI -7.408e-14 4.055e+00 0.000 1.000  
## CountryGHA -7.397e-14 4.034e+00 0.000 1.000  
## CountryBKF 1.840e+00 3.972e+00 0.463 0.644  
## CountryZIM -7.372e-14 4.118e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.8402 -0.8751 0.0000 0.0000 31.4898   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -2.222e-15 1.242e+00 0.000 1.000  
## CountryZAM -1.814e-14 4.118e+00 0.000 1.000  
## CountrySAF -1.850e-15 1.862e+00 0.000 1.000  
## CountryUGA 1.740e-15 2.150e+00 0.000 1.000  
## CountryURT 5.533e-01 2.027e+00 0.273 0.785  
## CountrySWA 1.445e-15 4.118e+00 0.000 1.000  
## CountrySEN 1.765e-15 1.603e+00 0.000 1.000  
## CountryZAI -6.094e-15 4.118e+00 0.000 1.000  
## CountryMOZ 1.689e-15 3.041e+00 0.000 1.000  
## CountryMLI 5.128e-15 1.549e+00 0.000 1.000  
## CountryKEN 2.750e-01 1.681e+00 0.164 0.870  
## CountryETH 6.500e-01 4.118e+00 0.158 0.875  
## CountryGUI 7.305e-16 1.603e+00 0.000 1.000  
## CountryGHA 3.877e-15 1.549e+00 0.000 1.000  
## CountryBKF 1.840e+00 1.378e+00 1.335 0.184  
##   
## (Dispersion parameter for gaussian family taken to be 15.41486)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2173.5 on 141 degrees of freedom  
## AIC: 885.65  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TcTvTz per country  
data$Country <- relevel(data$Country, ref= "BKF")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.15488 0.09274 1.670 0.0971 .  
## CountryZIM -0.15488 0.21350 -0.725 0.4694   
## CountryZAM -0.15488 0.61516 -0.252 0.8016   
## CountrySAF -0.15488 0.23415 -0.661 0.5094   
## CountryUGA -0.15488 0.28734 -0.539 0.5907   
## CountryURT -0.15488 0.26502 -0.584 0.5599   
## CountrySWA -0.15488 0.61516 -0.252 0.8016   
## CountrySEN -0.15488 0.18236 -0.849 0.3971   
## CountryZAI -0.15488 0.61516 -0.252 0.8016   
## CountryMOZ -0.15488 0.43990 -0.352 0.7253   
## CountryMLI -0.15488 0.17072 -0.907 0.3658   
## CountryKEN -0.15488 0.19854 -0.780 0.4366   
## CountryETH -0.15488 0.61516 -0.252 0.8016   
## CountryGUI -0.15488 0.18236 -0.849 0.3971   
## CountryGHA 0.23067 0.17072 1.351 0.1788   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GHA")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.3856 0.1433 2.690 0.00801 \*\*  
## CountryBKF -0.2307 0.1707 -1.351 0.17881   
## CountryZIM -0.3856 0.2398 -1.607 0.11018   
## CountryZAM -0.3856 0.6248 -0.617 0.53817   
## CountrySAF -0.3856 0.2584 -1.492 0.13792   
## CountryUGA -0.3856 0.3074 -1.254 0.21186   
## CountryURT -0.3856 0.2867 -1.345 0.18081   
## CountrySWA -0.3856 0.6248 -0.617 0.53817   
## CountrySEN -0.3856 0.2126 -1.813 0.07188 .   
## CountryZAI -0.3856 0.6248 -0.617 0.53817   
## CountryMOZ -0.3856 0.4533 -0.851 0.39643   
## CountryMLI -0.3856 0.2027 -1.902 0.05921 .   
## CountryKEN -0.3856 0.2266 -1.701 0.09111 .   
## CountryETH -0.3856 0.6248 -0.617 0.53817   
## CountryGUI -0.3856 0.2126 -1.813 0.07188 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "GUI")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.111e-17 1.570e-01 0.000 1.0000   
## CountryGHA 3.856e-01 2.126e-01 1.813 0.0719 .  
## CountryBKF 1.549e-01 1.824e-01 0.849 0.3971   
## CountryZIM -3.130e-17 2.483e-01 0.000 1.0000   
## CountryZAM -2.674e-17 6.281e-01 0.000 1.0000   
## CountrySAF -8.141e-18 2.662e-01 0.000 1.0000   
## CountryUGA 4.088e-18 3.140e-01 0.000 1.0000   
## CountryURT -5.633e-17 2.938e-01 0.000 1.0000   
## CountrySWA -5.675e-17 6.281e-01 0.000 1.0000   
## CountrySEN 8.960e-18 2.221e-01 0.000 1.0000   
## CountryZAI -5.486e-16 6.281e-01 0.000 1.0000   
## CountryMOZ 3.196e-16 4.578e-01 0.000 1.0000   
## CountryMLI -1.150e-18 2.126e-01 0.000 1.0000   
## CountryKEN -2.538e-17 2.355e-01 0.000 1.0000   
## CountryETH 2.723e-16 6.281e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ETH")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.759e-16 6.081e-01 0.000 1.000  
## CountryGUI -1.885e-16 6.281e-01 0.000 1.000  
## CountryGHA 3.856e-01 6.248e-01 0.617 0.538  
## CountryBKF 1.549e-01 6.152e-01 0.252 0.802  
## CountryZIM -6.738e-16 6.378e-01 0.000 1.000  
## CountryZAM -6.426e-16 8.600e-01 0.000 1.000  
## CountrySAF -6.638e-16 6.450e-01 0.000 1.000  
## CountryUGA -6.731e-16 6.662e-01 0.000 1.000  
## CountryURT -6.605e-16 6.569e-01 0.000 1.000  
## CountrySWA -1.001e-15 8.600e-01 0.000 1.000  
## CountrySEN -8.720e-16 6.281e-01 0.000 1.000  
## CountryZAI -9.147e-16 8.600e-01 0.000 1.000  
## CountryMOZ -3.195e-16 7.448e-01 0.000 1.000  
## CountryMLI -6.063e-16 6.248e-01 0.000 1.000  
## CountryKEN -7.006e-16 6.330e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "KEN")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.842e-16 1.756e-01 0.000 1.0000   
## CountryETH -7.399e-16 6.330e-01 0.000 1.0000   
## CountryGUI -5.957e-16 2.355e-01 0.000 1.0000   
## CountryGHA 3.856e-01 2.266e-01 1.701 0.0911 .  
## CountryBKF 1.549e-01 1.985e-01 0.780 0.4366   
## CountryZIM -9.688e-17 2.604e-01 0.000 1.0000   
## CountryZAM -2.043e-17 6.330e-01 0.000 1.0000   
## CountrySAF -1.546e-17 2.776e-01 0.000 1.0000   
## CountryUGA -6.666e-17 3.237e-01 0.000 1.0000   
## CountryURT 3.350e-18 3.041e-01 0.000 1.0000   
## CountrySWA -3.127e-16 6.330e-01 0.000 1.0000   
## CountrySEN 4.883e-16 2.355e-01 0.000 1.0000   
## CountryZAI 6.731e-16 6.330e-01 0.000 1.0000   
## CountryMOZ -6.895e-17 4.645e-01 0.000 1.0000   
## CountryMLI -1.487e-16 2.266e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MLI")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.575e-16 1.433e-01 0.000 1.0000   
## CountryKEN 9.424e-16 2.266e-01 0.000 1.0000   
## CountryETH -3.871e-18 6.248e-01 0.000 1.0000   
## CountryGUI 5.605e-16 2.126e-01 0.000 1.0000   
## CountryGHA 3.856e-01 2.027e-01 1.902 0.0592 .  
## CountryBKF 1.549e-01 1.707e-01 0.907 0.3658   
## CountryZIM 2.216e-16 2.398e-01 0.000 1.0000   
## CountryZAM 1.622e-16 6.248e-01 0.000 1.0000   
## CountrySAF 2.143e-16 2.584e-01 0.000 1.0000   
## CountryUGA -4.359e-17 3.074e-01 0.000 1.0000   
## CountryURT 3.818e-16 2.867e-01 0.000 1.0000   
## CountrySWA 5.115e-16 6.248e-01 0.000 1.0000   
## CountrySEN 1.825e-16 2.126e-01 0.000 1.0000   
## CountryZAI 1.313e-16 6.248e-01 0.000 1.0000   
## CountryMOZ 1.752e-16 4.533e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "MOZ")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 9.313e-16 4.300e-01 0.000 1.000  
## CountryMLI -1.292e-15 4.533e-01 0.000 1.000  
## CountryKEN -5.336e-16 4.645e-01 0.000 1.000  
## CountryETH -2.264e-15 7.448e-01 0.000 1.000  
## CountryGUI -8.098e-16 4.578e-01 0.000 1.000  
## CountryGHA 3.856e-01 4.533e-01 0.851 0.396  
## CountryBKF 1.549e-01 4.399e-01 0.352 0.725  
## CountryZIM -1.321e-15 4.711e-01 0.000 1.000  
## CountryZAM -1.397e-15 7.448e-01 0.000 1.000  
## CountrySAF -1.448e-15 4.808e-01 0.000 1.000  
## CountryUGA -1.319e-15 5.088e-01 0.000 1.000  
## CountryURT -1.320e-15 4.965e-01 0.000 1.000  
## CountrySWA -1.167e-15 7.448e-01 0.000 1.000  
## CountrySEN -1.199e-15 4.578e-01 0.000 1.000  
## CountryZAI -1.490e-15 7.448e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAI")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.519e-15 6.081e-01 0.000 1.000  
## CountryMOZ -1.173e-15 7.448e-01 0.000 1.000  
## CountryMLI -1.436e-15 6.248e-01 0.000 1.000  
## CountryKEN -2.066e-15 6.330e-01 0.000 1.000  
## CountryETH -4.228e-16 8.600e-01 0.000 1.000  
## CountryGUI -1.239e-15 6.281e-01 0.000 1.000  
## CountryGHA 3.856e-01 6.248e-01 0.617 0.538  
## CountryBKF 1.549e-01 6.152e-01 0.252 0.802  
## CountryZIM -1.457e-15 6.378e-01 0.000 1.000  
## CountryZAM -1.709e-15 8.600e-01 0.000 1.000  
## CountrySAF -4.173e-16 6.450e-01 0.000 1.000  
## CountryUGA -1.643e-15 6.662e-01 0.000 1.000  
## CountryURT -1.502e-15 6.569e-01 0.000 1.000  
## CountrySWA -1.154e-15 8.600e-01 0.000 1.000  
## CountrySEN -1.506e-15 6.281e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SEN")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.846e-16 1.570e-01 0.000 1.0000   
## CountryZAI -1.088e-15 6.281e-01 0.000 1.0000   
## CountryMOZ -1.567e-16 4.578e-01 0.000 1.0000   
## CountryMLI 5.867e-16 2.126e-01 0.000 1.0000   
## CountryKEN -5.107e-16 2.355e-01 0.000 1.0000   
## CountryETH -6.463e-16 6.281e-01 0.000 1.0000   
## CountryGUI 4.668e-16 2.221e-01 0.000 1.0000   
## CountryGHA 3.856e-01 2.126e-01 1.813 0.0719 .  
## CountryBKF 1.549e-01 1.824e-01 0.849 0.3971   
## CountryZIM 3.945e-16 2.483e-01 0.000 1.0000   
## CountryZAM 2.383e-15 6.281e-01 0.000 1.0000   
## CountrySAF 1.461e-16 2.662e-01 0.000 1.0000   
## CountryUGA 1.687e-16 3.140e-01 0.000 1.0000   
## CountryURT 2.270e-16 2.938e-01 0.000 1.0000   
## CountrySWA 2.311e-16 6.281e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SWA")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.335e-15 6.081e-01 0.000 1.000  
## CountrySEN -1.273e-15 6.281e-01 0.000 1.000  
## CountryZAI -7.438e-16 8.600e-01 0.000 1.000  
## CountryMOZ -1.282e-15 7.448e-01 0.000 1.000  
## CountryMLI -1.292e-15 6.248e-01 0.000 1.000  
## CountryKEN -1.014e-15 6.330e-01 0.000 1.000  
## CountryETH -2.095e-15 8.600e-01 0.000 1.000  
## CountryGUI -1.020e-15 6.281e-01 0.000 1.000  
## CountryGHA 3.856e-01 6.248e-01 0.617 0.538  
## CountryBKF 1.549e-01 6.152e-01 0.252 0.802  
## CountryZIM -1.030e-15 6.378e-01 0.000 1.000  
## CountryZAM -3.198e-15 8.600e-01 0.000 1.000  
## CountrySAF -1.091e-15 6.450e-01 0.000 1.000  
## CountryUGA -1.115e-15 6.662e-01 0.000 1.000  
## CountryURT -3.148e-16 6.569e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "URT")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 8.724e-18 2.483e-01 0.000 1.000  
## CountrySWA -1.264e-15 6.569e-01 0.000 1.000  
## CountrySEN -2.020e-16 2.938e-01 0.000 1.000  
## CountryZAI -5.886e-16 6.569e-01 0.000 1.000  
## CountryMOZ -3.753e-16 4.965e-01 0.000 1.000  
## CountryMLI -4.991e-17 2.867e-01 0.000 1.000  
## CountryKEN 1.979e-16 3.041e-01 0.000 1.000  
## CountryETH -4.254e-16 6.569e-01 0.000 1.000  
## CountryGUI -2.475e-16 2.938e-01 0.000 1.000  
## CountryGHA 3.856e-01 2.867e-01 1.345 0.181  
## CountryBKF 1.549e-01 2.650e-01 0.584 0.560  
## CountryZIM 4.747e-17 3.140e-01 0.000 1.000  
## CountryZAM 7.452e-17 6.569e-01 0.000 1.000  
## CountrySAF 6.471e-17 3.284e-01 0.000 1.000  
## CountryUGA 7.143e-17 3.682e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "UGA")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 8.308e-16 2.720e-01 0.000 1.000  
## CountryURT -7.052e-16 3.682e-01 0.000 1.000  
## CountrySWA -8.091e-16 6.662e-01 0.000 1.000  
## CountrySEN -5.799e-16 3.140e-01 0.000 1.000  
## CountryZAI -8.382e-16 6.662e-01 0.000 1.000  
## CountryMOZ -1.284e-15 5.088e-01 0.000 1.000  
## CountryMLI -7.760e-16 3.074e-01 0.000 1.000  
## CountryKEN -1.108e-15 3.237e-01 0.000 1.000  
## CountryETH -1.235e-15 6.662e-01 0.000 1.000  
## CountryGUI -4.197e-16 3.140e-01 0.000 1.000  
## CountryGHA 3.856e-01 3.074e-01 1.254 0.212  
## CountryBKF 1.549e-01 2.873e-01 0.539 0.591  
## CountryZIM -6.166e-16 3.331e-01 0.000 1.000  
## CountryZAM 3.259e-16 6.662e-01 0.000 1.000  
## CountrySAF -6.171e-16 3.467e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "SAF")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 3.726e-16 2.150e-01 0.000 1.000  
## CountryUGA 3.020e-16 3.467e-01 0.000 1.000  
## CountryURT -3.659e-16 3.284e-01 0.000 1.000  
## CountrySWA -2.301e-16 6.450e-01 0.000 1.000  
## CountrySEN -2.245e-17 2.662e-01 0.000 1.000  
## CountryZAI -5.800e-16 6.450e-01 0.000 1.000  
## CountryMOZ -3.928e-16 4.808e-01 0.000 1.000  
## CountryMLI -3.935e-16 2.584e-01 0.000 1.000  
## CountryKEN -4.212e-17 2.776e-01 0.000 1.000  
## CountryETH -7.715e-17 6.450e-01 0.000 1.000  
## CountryGUI -4.686e-17 2.662e-01 0.000 1.000  
## CountryGHA 3.856e-01 2.584e-01 1.492 0.138  
## CountryBKF 1.549e-01 2.342e-01 0.661 0.509  
## CountryZIM -1.698e-16 2.885e-01 0.000 1.000  
## CountryZAM -2.079e-16 6.450e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 5.542e-15 6.081e-01 0.000 1.000  
## CountrySAF -5.088e-15 6.450e-01 0.000 1.000  
## CountryUGA -5.235e-15 6.662e-01 0.000 1.000  
## CountryURT -5.387e-15 6.569e-01 0.000 1.000  
## CountrySWA -5.570e-15 8.600e-01 0.000 1.000  
## CountrySEN -5.956e-15 6.281e-01 0.000 1.000  
## CountryZAI -5.664e-15 8.600e-01 0.000 1.000  
## CountryMOZ -5.484e-15 7.448e-01 0.000 1.000  
## CountryMLI -5.579e-15 6.248e-01 0.000 1.000  
## CountryKEN -4.808e-15 6.330e-01 0.000 1.000  
## CountryETH -5.076e-15 8.600e-01 0.000 1.000  
## CountryGUI -5.719e-15 6.281e-01 0.000 1.000  
## CountryGHA 3.856e-01 6.248e-01 0.617 0.538  
## CountryBKF 1.549e-01 6.152e-01 0.252 0.802  
## CountryZIM -5.438e-15 6.378e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

data$Country <- relevel(data$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.1549 0.0000 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.150e-17 1.923e-01 0.000 1.000  
## CountryZAM -1.619e-15 6.378e-01 0.000 1.000  
## CountrySAF -6.904e-16 2.885e-01 0.000 1.000  
## CountryUGA -3.656e-16 3.331e-01 0.000 1.000  
## CountryURT 2.697e-16 3.140e-01 0.000 1.000  
## CountrySWA -1.530e-16 6.378e-01 0.000 1.000  
## CountrySEN 1.372e-16 2.483e-01 0.000 1.000  
## CountryZAI -7.134e-16 6.378e-01 0.000 1.000  
## CountryMOZ -3.098e-16 4.711e-01 0.000 1.000  
## CountryMLI 3.191e-16 2.398e-01 0.000 1.000  
## CountryKEN 2.307e-16 2.604e-01 0.000 1.000  
## CountryETH -9.883e-16 6.378e-01 0.000 1.000  
## CountryGUI 1.577e-17 2.483e-01 0.000 1.000  
## CountryGHA 3.856e-01 2.398e-01 1.607 0.110  
## CountryBKF 1.549e-01 2.135e-01 0.725 0.469  
##   
## (Dispersion parameter for gaussian family taken to be 0.3698193)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 52.145 on 141 degrees of freedom  
## AIC: 303.76  
##   
## Number of Fisher Scoring iterations: 2

## Statistics for Supplementary table 4

#====== Glm Tc per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.4578 2.4439 1.415 0.15924   
## SpeciesGt -2.1635 2.8355 -0.763 0.44669   
## SpeciesGpp -3.4578 7.7283 -0.447 0.65524   
## SpeciesGpg -2.5937 2.5883 -1.002 0.31795   
## SpeciesGp 7.8708 2.9210 2.695 0.00788 \*\*  
## SpeciesGmsm 0.7582 4.0895 0.185 0.85317   
## SpeciesGmm 3.6385 3.5626 1.021 0.30880   
## SpeciesGmed 5.7572 4.4058 1.307 0.19336   
## SpeciesGff -0.8644 4.8878 -0.177 0.85987   
## SpeciesGb -0.6578 4.0895 -0.161 0.87244   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.8000 3.2789 0.854 0.3945   
## SpeciesGa 0.6578 4.0895 0.161 0.8724   
## SpeciesGt -1.5058 3.5803 -0.421 0.6747   
## SpeciesGpp -2.8000 8.0315 -0.349 0.7279   
## SpeciesGpg -1.9359 3.3878 -0.571 0.5686   
## SpeciesGp 8.5286 3.6484 2.338 0.0208 \*  
## SpeciesGmsm 1.4160 4.6370 0.305 0.7605   
## SpeciesGmm 4.2963 4.1797 1.028 0.3057   
## SpeciesGmed 6.4150 4.9183 1.304 0.1942   
## SpeciesGff -0.2067 5.3544 -0.039 0.9693   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.5933 4.2330 0.613 0.5411   
## SpeciesGb 0.2067 5.3544 0.039 0.9693   
## SpeciesGa 0.8644 4.8878 0.177 0.8599   
## SpeciesGt -1.2991 4.4705 -0.291 0.7718   
## SpeciesGpp -2.5933 8.4660 -0.306 0.7598   
## SpeciesGpg -1.7293 4.3179 -0.400 0.6894   
## SpeciesGp 8.7352 4.5253 1.930 0.0555 .  
## SpeciesGmsm 1.6227 5.3544 0.303 0.7623   
## SpeciesGmm 4.5029 4.9636 0.907 0.3658   
## SpeciesGmed 6.6217 5.5997 1.183 0.2389   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 9.215 3.666 2.514 0.0130 \*  
## SpeciesGff -6.622 5.600 -1.183 0.2389   
## SpeciesGb -6.415 4.918 -1.304 0.1942   
## SpeciesGa -5.757 4.406 -1.307 0.1934   
## SpeciesGt -7.921 3.938 -2.011 0.0461 \*  
## SpeciesGpp -9.215 8.197 -1.124 0.2628   
## SpeciesGpg -8.351 3.764 -2.219 0.0280 \*  
## SpeciesGp 2.114 4.000 0.528 0.5980   
## SpeciesGmsm -4.999 4.918 -1.016 0.3111   
## SpeciesGmm -2.119 4.490 -0.472 0.6377   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.096 2.592 2.738 0.00696 \*\*  
## SpeciesGmed 2.119 4.490 0.472 0.63770   
## SpeciesGff -4.503 4.964 -0.907 0.36580   
## SpeciesGb -4.296 4.180 -1.028 0.30571   
## SpeciesGa -3.638 3.563 -1.021 0.30880   
## SpeciesGt -5.802 2.964 -1.957 0.05222 .   
## SpeciesGpp -7.096 7.776 -0.913 0.36300   
## SpeciesGpg -6.232 2.729 -2.284 0.02382 \*   
## SpeciesGp 4.232 3.046 1.389 0.16683   
## SpeciesGmsm -2.880 4.180 -0.689 0.49186   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.2160 3.2789 1.286 0.2005   
## SpeciesGmm 2.8803 4.1797 0.689 0.4919   
## SpeciesGmed 4.9990 4.9183 1.016 0.3111   
## SpeciesGff -1.6227 5.3544 -0.303 0.7623   
## SpeciesGb -1.4160 4.6370 -0.305 0.7605   
## SpeciesGa -0.7582 4.0895 -0.185 0.8532   
## SpeciesGt -2.9218 3.5803 -0.816 0.4158   
## SpeciesGpp -4.2160 8.0315 -0.525 0.6004   
## SpeciesGpg -3.3519 3.3878 -0.989 0.3241   
## SpeciesGp 7.1126 3.6484 1.950 0.0532 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 11.329 1.600 7.081 5.60e-11 \*\*\*  
## SpeciesGmsm -7.113 3.648 -1.950 0.05315 .   
## SpeciesGmm -4.232 3.046 -1.389 0.16683   
## SpeciesGmed -2.114 4.000 -0.528 0.59801   
## SpeciesGff -8.735 4.525 -1.930 0.05550 .   
## SpeciesGb -8.529 3.648 -2.338 0.02076 \*   
## SpeciesGa -7.871 2.921 -2.695 0.00788 \*\*   
## SpeciesGt -10.034 2.151 -4.665 6.92e-06 \*\*\*  
## SpeciesGpp -11.329 7.504 -1.510 0.13330   
## SpeciesGpg -10.465 1.813 -5.773 4.52e-08 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.8641 0.8523 1.014 0.3124   
## SpeciesGp 10.4645 1.8128 5.773 4.52e-08 \*\*\*  
## SpeciesGmsm 3.3519 3.3878 0.989 0.3241   
## SpeciesGmm 6.2322 2.7287 2.284 0.0238 \*   
## SpeciesGmed 8.3509 3.7636 2.219 0.0280 \*   
## SpeciesGff 1.7293 4.3179 0.400 0.6894   
## SpeciesGb 1.9359 3.3878 0.571 0.5686   
## SpeciesGa 2.5937 2.5883 1.002 0.3179   
## SpeciesGt 0.4302 1.6715 0.257 0.7973   
## SpeciesGpp -0.8641 7.3811 -0.117 0.9070   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.659e-13 7.332e+00 0.000 1.000  
## SpeciesGpg 8.641e-01 7.381e+00 0.117 0.907  
## SpeciesGp 1.133e+01 7.504e+00 1.510 0.133  
## SpeciesGmsm 4.216e+00 8.032e+00 0.525 0.600  
## SpeciesGmm 7.096e+00 7.776e+00 0.913 0.363  
## SpeciesGmed 9.215e+00 8.197e+00 1.124 0.263  
## SpeciesGff 2.593e+00 8.466e+00 0.306 0.760  
## SpeciesGb 2.800e+00 8.032e+00 0.349 0.728  
## SpeciesGa 3.458e+00 7.728e+00 0.447 0.655  
## SpeciesGt 1.294e+00 7.471e+00 0.173 0.863  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_Tc) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -11.329 -1.294 -0.864 -0.524 49.136   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.2942 1.4379 0.900 0.3695   
## SpeciesGpp -1.2942 7.4714 -0.173 0.8627   
## SpeciesGpg -0.4302 1.6715 -0.257 0.7973   
## SpeciesGp 10.0343 2.1511 4.665 6.92e-06 \*\*\*  
## SpeciesGmsm 2.9218 3.5803 0.816 0.4158   
## SpeciesGmm 5.8020 2.9643 1.957 0.0522 .   
## SpeciesGmed 7.9208 3.9378 2.011 0.0461 \*   
## SpeciesGff 1.2991 4.4705 0.291 0.7718   
## SpeciesGb 1.5058 3.5803 0.421 0.6747   
## SpeciesGa 2.1635 2.8355 0.763 0.4467   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 53.75452)  
##   
## Null deviance: 10017.9 on 155 degrees of freedom  
## Residual deviance: 7848.2 on 146 degrees of freedom  
## AIC: 1075.9  
##   
## Number of Fisher Scoring iterations: 2

#====== Glm Tv per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.9511 5.8977 0.161 0.8721   
## SpeciesGt 13.8258 6.8427 2.021 0.0452 \*  
## SpeciesGpp 1.9089 18.6501 0.102 0.9186   
## SpeciesGpg 12.9500 6.2460 2.073 0.0399 \*  
## SpeciesGp 1.4051 7.0491 0.199 0.8423   
## SpeciesGmsm 9.4989 9.8687 0.963 0.3374   
## SpeciesGmm -0.1024 8.5973 -0.012 0.9905   
## SpeciesGmed 10.2039 10.6322 0.960 0.3388   
## SpeciesGff 3.9022 11.7953 0.331 0.7412   
## SpeciesGb 0.5149 9.8687 0.052 0.9585   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.4660 7.9125 0.185 0.853  
## SpeciesGa -0.5149 9.8687 -0.052 0.958  
## SpeciesGt 13.3109 8.6399 1.541 0.126  
## SpeciesGpp 1.3940 19.3817 0.072 0.943  
## SpeciesGpg 12.4351 8.1755 1.521 0.130  
## SpeciesGp 0.8902 8.8043 0.101 0.920  
## SpeciesGmsm 8.9840 11.1900 0.803 0.423  
## SpeciesGmm -0.6172 10.0866 -0.061 0.951  
## SpeciesGmed 9.6890 11.8688 0.816 0.416  
## SpeciesGff 3.3873 12.9211 0.262 0.794  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 4.853 10.215 0.475 0.635  
## SpeciesGb -3.387 12.921 -0.262 0.794  
## SpeciesGa -3.902 11.795 -0.331 0.741  
## SpeciesGt 9.924 10.788 0.920 0.359  
## SpeciesGpp -1.993 20.430 -0.098 0.922  
## SpeciesGpg 9.048 10.420 0.868 0.387  
## SpeciesGp -2.497 10.920 -0.229 0.819  
## SpeciesGmsm 5.597 12.921 0.433 0.666  
## SpeciesGmm -4.005 11.978 -0.334 0.739  
## SpeciesGmed 6.302 13.513 0.466 0.642  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 11.155 8.847 1.261 0.209  
## SpeciesGff -6.302 13.513 -0.466 0.642  
## SpeciesGb -9.689 11.869 -0.816 0.416  
## SpeciesGa -10.204 10.632 -0.960 0.339  
## SpeciesGt 3.622 9.503 0.381 0.704  
## SpeciesGpp -8.295 19.781 -0.419 0.676  
## SpeciesGpg 2.746 9.082 0.302 0.763  
## SpeciesGp -8.799 9.652 -0.912 0.363  
## SpeciesGmsm -0.705 11.869 -0.059 0.953  
## SpeciesGmm -10.306 10.835 -0.951 0.343  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.8488 6.2554 0.136 0.8923   
## SpeciesGmed 10.3062 10.8347 0.951 0.3431   
## SpeciesGff 4.0046 11.9782 0.334 0.7386   
## SpeciesGb 0.6172 10.0866 0.061 0.9513   
## SpeciesGa 0.1024 8.5973 0.012 0.9905   
## SpeciesGt 13.9282 7.1533 1.947 0.0534 .  
## SpeciesGpp 2.0112 18.7663 0.107 0.9148   
## SpeciesGpg 13.0523 6.5849 1.982 0.0493 \*  
## SpeciesGp 1.5074 7.3510 0.205 0.8378   
## SpeciesGmsm 9.6012 10.0866 0.952 0.3427   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 10.450 7.912 1.321 0.189  
## SpeciesGmm -9.601 10.087 -0.952 0.343  
## SpeciesGmed 0.705 11.869 0.059 0.953  
## SpeciesGff -5.597 12.921 -0.433 0.666  
## SpeciesGb -8.984 11.190 -0.803 0.423  
## SpeciesGa -9.499 9.869 -0.963 0.337  
## SpeciesGt 4.327 8.640 0.501 0.617  
## SpeciesGpp -7.590 19.382 -0.392 0.696  
## SpeciesGpg 3.451 8.175 0.422 0.674  
## SpeciesGp -8.094 8.804 -0.919 0.359  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.3562 3.8609 0.610 0.54263   
## SpeciesGmsm 8.0938 8.8043 0.919 0.35945   
## SpeciesGmm -1.5074 7.3510 -0.205 0.83781   
## SpeciesGmed 8.7988 9.6523 0.912 0.36350   
## SpeciesGff 2.4971 10.9204 0.229 0.81945   
## SpeciesGb -0.8902 8.8043 -0.101 0.91960   
## SpeciesGa -1.4051 7.0491 -0.199 0.84228   
## SpeciesGt 12.4207 5.1910 2.393 0.01800 \*   
## SpeciesGpp 0.5038 18.1094 0.028 0.97784   
## SpeciesGpg 11.5449 4.3746 2.639 0.00922 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 13.9011 2.0568 6.759 3.1e-10 \*\*\*  
## SpeciesGp -11.5449 4.3746 -2.639 0.00922 \*\*   
## SpeciesGmsm -3.4511 8.1755 -0.422 0.67355   
## SpeciesGmm -13.0523 6.5849 -1.982 0.04934 \*   
## SpeciesGmed -2.7461 9.0824 -0.302 0.76282   
## SpeciesGff -9.0477 10.4201 -0.868 0.38665   
## SpeciesGb -12.4351 8.1755 -1.521 0.13042   
## SpeciesGa -12.9500 6.2460 -2.073 0.03990 \*   
## SpeciesGt 0.8758 4.0337 0.217 0.82841   
## SpeciesGpp -11.0411 17.8121 -0.620 0.53631   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.8600 17.6930 0.162 0.872  
## SpeciesGpg 11.0411 17.8121 0.620 0.536  
## SpeciesGp -0.5038 18.1094 -0.028 0.978  
## SpeciesGmsm 7.5900 19.3817 0.392 0.696  
## SpeciesGmm -2.0112 18.7663 -0.107 0.915  
## SpeciesGmed 8.2950 19.7814 0.419 0.676  
## SpeciesGff 1.9933 20.4301 0.098 0.922  
## SpeciesGb -1.3940 19.3817 -0.072 0.943  
## SpeciesGa -1.9089 18.6501 -0.102 0.919  
## SpeciesGt 11.9169 18.0300 0.661 0.510  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_Tv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -14.777 -13.901 -2.356 2.192 86.099   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 14.7769 3.4699 4.259 3.67e-05 \*\*\*  
## SpeciesGpp -11.9169 18.0300 -0.661 0.5097   
## SpeciesGpg -0.8758 4.0337 -0.217 0.8284   
## SpeciesGp -12.4207 5.1910 -2.393 0.0180 \*   
## SpeciesGmsm -4.3269 8.6399 -0.501 0.6173   
## SpeciesGmm -13.9282 7.1533 -1.947 0.0534 .   
## SpeciesGmed -3.6219 9.5027 -0.381 0.7036   
## SpeciesGff -9.9236 10.7883 -0.920 0.3592   
## SpeciesGb -13.3109 8.6399 -1.541 0.1256   
## SpeciesGa -13.8258 6.8427 -2.021 0.0452 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 313.0421)  
##   
## Null deviance: 50549 on 155 degrees of freedom  
## Residual deviance: 45704 on 146 degrees of freedom  
## AIC: 1350.8  
##   
## Number of Fisher Scoring iterations: 2

#====== glm Tz per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.737 4.725 1.002 0.317808   
## SpeciesGt 19.693 5.482 3.592 0.000448 \*\*\*  
## SpeciesGpp -4.737 14.943 -0.317 0.751706   
## SpeciesGpg -3.007 5.004 -0.601 0.548904   
## SpeciesGp -3.820 5.648 -0.676 0.499825   
## SpeciesGmsm -4.133 7.907 -0.523 0.602002   
## SpeciesGmm -4.263 6.888 -0.619 0.536969   
## SpeciesGmed 11.493 8.519 1.349 0.179364   
## SpeciesGff -4.383 9.451 -0.464 0.643472   
## SpeciesGb -1.271 7.907 -0.161 0.872550   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.466 6.340 0.547 0.58541   
## SpeciesGa 1.271 7.907 0.161 0.87255   
## SpeciesGt 20.963 6.922 3.028 0.00291 \*\*  
## SpeciesGpp -3.466 15.529 -0.223 0.82370   
## SpeciesGpg -1.736 6.550 -0.265 0.79137   
## SpeciesGp -2.550 7.054 -0.361 0.71828   
## SpeciesGmsm -2.862 8.966 -0.319 0.75002   
## SpeciesGmm -2.992 8.082 -0.370 0.71173   
## SpeciesGmed 12.764 9.510 1.342 0.18160   
## SpeciesGff -3.113 10.353 -0.301 0.76410   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.3533 8.1845 0.043 0.96562   
## SpeciesGb 3.1127 10.3527 0.301 0.76410   
## SpeciesGa 4.3833 9.4506 0.464 0.64347   
## SpeciesGt 24.0759 8.6438 2.785 0.00606 \*\*  
## SpeciesGpp -0.3533 16.3690 -0.022 0.98281   
## SpeciesGpg 1.3767 8.3487 0.165 0.86925   
## SpeciesGp 0.5629 8.7496 0.064 0.94880   
## SpeciesGmsm 0.2507 10.3527 0.024 0.98072   
## SpeciesGmm 0.1204 9.5972 0.013 0.99001   
## SpeciesGmed 15.8767 10.8271 1.466 0.14469   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 16.230 7.088 2.290 0.0235 \*  
## SpeciesGff -15.877 10.827 -1.466 0.1447   
## SpeciesGb -12.764 9.510 -1.342 0.1816   
## SpeciesGa -11.493 8.519 -1.349 0.1794   
## SpeciesGt 8.199 7.614 1.077 0.2833   
## SpeciesGpp -16.230 15.849 -1.024 0.3075   
## SpeciesGpg -14.500 7.277 -1.993 0.0482 \*  
## SpeciesGp -15.314 7.734 -1.980 0.0496 \*  
## SpeciesGmsm -15.626 9.510 -1.643 0.1025   
## SpeciesGmm -15.756 8.681 -1.815 0.0716 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.4737 5.0120 0.095 0.9248   
## SpeciesGmed 15.7562 8.6810 1.815 0.0716 .   
## SpeciesGff -0.1204 9.5972 -0.013 0.9900   
## SpeciesGb 2.9923 8.0815 0.370 0.7117   
## SpeciesGa 4.2629 6.8883 0.619 0.5370   
## SpeciesGt 23.9555 5.7314 4.180 5.01e-05 \*\*\*  
## SpeciesGpp -0.4737 15.0359 -0.032 0.9749   
## SpeciesGpg 1.2563 5.2759 0.238 0.8121   
## SpeciesGp 0.4424 5.8897 0.075 0.9402   
## SpeciesGmsm 0.1303 8.0815 0.016 0.9872   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.6040 6.3397 0.095 0.924229   
## SpeciesGmm -0.1302 8.0815 -0.016 0.987163   
## SpeciesGmed 15.6260 9.5095 1.643 0.102494   
## SpeciesGff -0.2507 10.3527 -0.024 0.980716   
## SpeciesGb 2.8620 8.9657 0.319 0.750018   
## SpeciesGa 4.1327 7.9070 0.523 0.602002   
## SpeciesGt 23.8252 6.9225 3.442 0.000754 \*\*\*  
## SpeciesGpp -0.6040 15.5290 -0.039 0.969027   
## SpeciesGpg 1.1260 6.5504 0.172 0.863755   
## SpeciesGp 0.3122 7.0541 0.044 0.964761   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.9162 3.0934 0.296 0.7675   
## SpeciesGmsm -0.3122 7.0541 -0.044 0.9648   
## SpeciesGmm -0.4424 5.8897 -0.075 0.9402   
## SpeciesGmed 15.3138 7.7336 1.980 0.0496 \*   
## SpeciesGff -0.5629 8.7496 -0.064 0.9488   
## SpeciesGb 2.5498 7.0541 0.361 0.7183   
## SpeciesGa 3.8205 5.6478 0.676 0.4998   
## SpeciesGt 23.5130 4.1592 5.653 8.01e-08 \*\*\*  
## SpeciesGpp -0.9162 14.5096 -0.063 0.9497   
## SpeciesGpg 0.8138 3.5050 0.232 0.8167   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.7300 1.6479 1.050 0.2955   
## SpeciesGp -0.8138 3.5050 -0.232 0.8167   
## SpeciesGmsm -1.1260 6.5504 -0.172 0.8638   
## SpeciesGmm -1.2563 5.2759 -0.238 0.8121   
## SpeciesGmed 14.5000 7.2770 1.993 0.0482 \*   
## SpeciesGff -1.3767 8.3487 -0.165 0.8693   
## SpeciesGb 1.7360 6.5504 0.265 0.7914   
## SpeciesGa 3.0067 5.0044 0.601 0.5489   
## SpeciesGt 22.6992 3.2318 7.024 7.6e-11 \*\*\*  
## SpeciesGpp -1.7300 14.2714 -0.121 0.9037   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.267e-14 1.418e+01 0.000 1.000   
## SpeciesGpg 1.730e+00 1.427e+01 0.121 0.904   
## SpeciesGp 9.162e-01 1.451e+01 0.063 0.950   
## SpeciesGmsm 6.040e-01 1.553e+01 0.039 0.969   
## SpeciesGmm 4.737e-01 1.504e+01 0.032 0.975   
## SpeciesGmed 1.623e+01 1.585e+01 1.024 0.308   
## SpeciesGff 3.533e-01 1.637e+01 0.022 0.983   
## SpeciesGb 3.466e+00 1.553e+01 0.223 0.824   
## SpeciesGa 4.737e+00 1.494e+01 0.317 0.752   
## SpeciesGt 2.443e+01 1.445e+01 1.691 0.093 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_Tz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -24.429 -1.730 -1.730 -0.102 75.571   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 24.429 2.780 8.787 3.85e-15 \*\*\*  
## SpeciesGpp -24.429 14.446 -1.691 0.092957 .   
## SpeciesGpg -22.699 3.232 -7.024 7.60e-11 \*\*\*  
## SpeciesGp -23.513 4.159 -5.653 8.01e-08 \*\*\*  
## SpeciesGmsm -23.825 6.922 -3.442 0.000754 \*\*\*  
## SpeciesGmm -23.955 5.731 -4.180 5.01e-05 \*\*\*  
## SpeciesGmed -8.199 7.614 -1.077 0.283300   
## SpeciesGff -24.076 8.644 -2.785 0.006057 \*\*   
## SpeciesGb -20.963 6.922 -3.028 0.002909 \*\*   
## SpeciesGa -19.693 5.482 -3.592 0.000448 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 200.9577)  
##   
## Null deviance: 41046 on 155 degrees of freedom  
## Residual deviance: 29340 on 146 degrees of freedom  
## AIC: 1281.7  
##   
## Number of Fisher Scoring iterations: 2

#======= Glm Tsg per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.209 3.655 1.425 0.1562   
## SpeciesGt -5.209 4.240 -1.228 0.2213   
## SpeciesGpp -5.209 11.557 -0.451 0.6529   
## SpeciesGpg -2.603 3.871 -0.673 0.5023   
## SpeciesGp 10.174 4.368 2.329 0.0212 \*  
## SpeciesGmsm -5.209 6.115 -0.852 0.3957   
## SpeciesGmm 7.844 5.328 1.472 0.1431   
## SpeciesGmed -5.209 6.589 -0.791 0.4305   
## SpeciesGff 2.391 7.309 0.327 0.7440   
## SpeciesGb 3.725 6.115 0.609 0.5434   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 8.934 4.903 1.822 0.0705 .  
## SpeciesGa -3.725 6.115 -0.609 0.5434   
## SpeciesGt -8.934 5.354 -1.669 0.0973 .  
## SpeciesGpp -8.934 12.010 -0.744 0.4582   
## SpeciesGpg -6.328 5.066 -1.249 0.2136   
## SpeciesGp 6.449 5.456 1.182 0.2391   
## SpeciesGmsm -8.934 6.934 -1.288 0.1996   
## SpeciesGmm 4.119 6.250 0.659 0.5110   
## SpeciesGmed -8.934 7.355 -1.215 0.2264   
## SpeciesGff -1.334 8.007 -0.167 0.8679   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 7.600 6.330 1.201 0.232  
## SpeciesGb 1.334 8.007 0.167 0.868  
## SpeciesGa -2.391 7.309 -0.327 0.744  
## SpeciesGt -7.600 6.685 -1.137 0.257  
## SpeciesGpp -7.600 12.660 -0.600 0.549  
## SpeciesGpg -4.994 6.457 -0.773 0.440  
## SpeciesGp 7.783 6.767 1.150 0.252  
## SpeciesGmsm -7.600 8.007 -0.949 0.344  
## SpeciesGmm 5.453 7.423 0.735 0.464  
## SpeciesGmed -7.600 8.374 -0.908 0.366  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.767e-14 5.482e+00 0.000 1.0000   
## SpeciesGff 7.600e+00 8.374e+00 0.908 0.3656   
## SpeciesGb 8.934e+00 7.355e+00 1.215 0.2264   
## SpeciesGa 5.209e+00 6.589e+00 0.791 0.4305   
## SpeciesGt -7.456e-14 5.889e+00 0.000 1.0000   
## SpeciesGpp -2.052e-14 1.226e+01 0.000 1.0000   
## SpeciesGpg 2.606e+00 5.628e+00 0.463 0.6441   
## SpeciesGp 1.538e+01 5.981e+00 2.572 0.0111 \*  
## SpeciesGmsm -4.917e-14 7.355e+00 0.000 1.0000   
## SpeciesGmm 1.305e+01 6.714e+00 1.944 0.0538 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 13.053 3.876 3.367 0.000971 \*\*\*  
## SpeciesGmed -13.052 6.714 -1.944 0.053810 .   
## SpeciesGff -5.453 7.423 -0.735 0.463775   
## SpeciesGb -4.119 6.250 -0.659 0.510988   
## SpeciesGa -7.844 5.328 -1.472 0.143098   
## SpeciesGt -13.053 4.433 -2.945 0.003765 \*\*   
## SpeciesGpp -13.053 11.629 -1.122 0.263532   
## SpeciesGpg -10.447 4.081 -2.560 0.011477 \*   
## SpeciesGp 2.330 4.555 0.512 0.609720   
## SpeciesGmsm -13.053 6.250 -2.088 0.038511 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.580e-14 4.903e+00 0.000 1.00000   
## SpeciesGmm 1.305e+01 6.250e+00 2.088 0.03851 \*   
## SpeciesGmed -8.146e-14 7.355e+00 0.000 1.00000   
## SpeciesGff 7.600e+00 8.007e+00 0.949 0.34410   
## SpeciesGb 8.934e+00 6.934e+00 1.288 0.19965   
## SpeciesGa 5.209e+00 6.115e+00 0.852 0.39574   
## SpeciesGt -6.916e-14 5.354e+00 0.000 1.00000   
## SpeciesGpp -2.379e-13 1.201e+01 0.000 1.00000   
## SpeciesGpg 2.606e+00 5.066e+00 0.514 0.60782   
## SpeciesGp 1.538e+01 5.456e+00 2.820 0.00548 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 15.383 2.393 6.430 1.71e-09 \*\*\*  
## SpeciesGmsm -15.383 5.456 -2.820 0.00548 \*\*   
## SpeciesGmm -2.330 4.555 -0.512 0.60972   
## SpeciesGmed -15.383 5.981 -2.572 0.01112 \*   
## SpeciesGff -7.783 6.767 -1.150 0.25198   
## SpeciesGb -6.449 5.456 -1.182 0.23912   
## SpeciesGa -10.174 4.368 -2.329 0.02122 \*   
## SpeciesGt -15.383 3.217 -4.782 4.20e-06 \*\*\*  
## SpeciesGpp -15.383 11.222 -1.371 0.17255   
## SpeciesGpg -12.777 2.711 -4.713 5.63e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.606 1.275 2.044 0.0427 \*   
## SpeciesGp 12.777 2.711 4.713 5.63e-06 \*\*\*  
## SpeciesGmsm -2.606 5.066 -0.514 0.6078   
## SpeciesGmm 10.447 4.081 2.560 0.0115 \*   
## SpeciesGmed -2.606 5.628 -0.463 0.6441   
## SpeciesGff 4.994 6.457 0.773 0.4405   
## SpeciesGb 6.328 5.066 1.249 0.2136   
## SpeciesGa 2.603 3.871 0.673 0.5023   
## SpeciesGt -2.606 2.500 -1.042 0.2990   
## SpeciesGpp -2.606 11.038 -0.236 0.8137   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.793e-13 1.096e+01 0.000 1.000  
## SpeciesGpg 2.606e+00 1.104e+01 0.236 0.814  
## SpeciesGp 1.538e+01 1.122e+01 1.371 0.173  
## SpeciesGmsm 1.490e-13 1.201e+01 0.000 1.000  
## SpeciesGmm 1.305e+01 1.163e+01 1.122 0.264  
## SpeciesGmed 1.710e-13 1.226e+01 0.000 1.000  
## SpeciesGff 7.600e+00 1.266e+01 0.600 0.549  
## SpeciesGb 8.934e+00 1.201e+01 0.744 0.458  
## SpeciesGa 5.209e+00 1.156e+01 0.451 0.653  
## SpeciesGt 1.590e-13 1.117e+01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.816e-14 2.150e+00 0.000 1.00000   
## SpeciesGpp -3.698e-14 1.117e+01 0.000 1.00000   
## SpeciesGpg 2.606e+00 2.500e+00 1.042 0.29895   
## SpeciesGp 1.538e+01 3.217e+00 4.782 4.2e-06 \*\*\*  
## SpeciesGmsm -2.116e-14 5.354e+00 0.000 1.00000   
## SpeciesGmm 1.305e+01 4.433e+00 2.945 0.00376 \*\*   
## SpeciesGmed 2.658e-14 5.889e+00 0.000 1.00000   
## SpeciesGff 7.600e+00 6.685e+00 1.137 0.25747   
## SpeciesGb 8.934e+00 5.354e+00 1.669 0.09733 .   
## SpeciesGa 5.209e+00 4.240e+00 1.228 0.22126   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

#========= Glm TcTv per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.2100 0.3704 0.567 0.5716   
## SpeciesGt -0.1088 0.4298 -0.253 0.8004   
## SpeciesGpp -0.2100 1.1714 -0.179 0.8580   
## SpeciesGpg -0.2100 0.3923 -0.535 0.5933   
## SpeciesGp 0.7719 0.4427 1.743 0.0834 .  
## SpeciesGmsm -0.2100 0.6198 -0.339 0.7352   
## SpeciesGmm -0.2100 0.5400 -0.389 0.6979   
## SpeciesGmed 1.4575 0.6678 2.183 0.0307 \*  
## SpeciesGff 1.0967 0.7408 1.480 0.1409   
## SpeciesGb -0.2100 0.6198 -0.339 0.7352   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.356e-16 4.970e-01 0.000 1.0000   
## SpeciesGa 2.100e-01 6.198e-01 0.339 0.7352   
## SpeciesGt 1.012e-01 5.427e-01 0.186 0.8524   
## SpeciesGpp -3.124e-16 1.217e+00 0.000 1.0000   
## SpeciesGpg -1.501e-15 5.135e-01 0.000 1.0000   
## SpeciesGp 9.819e-01 5.530e-01 1.776 0.0779 .  
## SpeciesGmsm 1.420e-15 7.028e-01 0.000 1.0000   
## SpeciesGmm 9.121e-16 6.335e-01 0.000 1.0000   
## SpeciesGmed 1.668e+00 7.455e-01 2.237 0.0268 \*  
## SpeciesGff 1.307e+00 8.115e-01 1.610 0.1095   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.3067 0.6416 2.037 0.0435 \*  
## SpeciesGb -1.3067 0.8115 -1.610 0.1095   
## SpeciesGa -1.0967 0.7408 -1.480 0.1409   
## SpeciesGt -1.2055 0.6776 -1.779 0.0773 .  
## SpeciesGpp -1.3067 1.2832 -1.018 0.3102   
## SpeciesGpg -1.3067 0.6545 -1.997 0.0477 \*  
## SpeciesGp -0.3248 0.6859 -0.473 0.6366   
## SpeciesGmsm -1.3067 0.8115 -1.610 0.1095   
## SpeciesGmm -1.3067 0.7523 -1.737 0.0845 .  
## SpeciesGmed 0.3608 0.8487 0.425 0.6714   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.6675 0.5556 3.001 0.00316 \*\*  
## SpeciesGff -0.3608 0.8487 -0.425 0.67136   
## SpeciesGb -1.6675 0.7455 -2.237 0.02681 \*   
## SpeciesGa -1.4575 0.6678 -2.183 0.03066 \*   
## SpeciesGt -1.5663 0.5968 -2.624 0.00960 \*\*  
## SpeciesGpp -1.6675 1.2424 -1.342 0.18164   
## SpeciesGpg -1.6675 0.5704 -2.923 0.00402 \*\*  
## SpeciesGp -0.6856 0.6062 -1.131 0.25995   
## SpeciesGmsm -1.6675 0.7455 -2.237 0.02681 \*   
## SpeciesGmm -1.6675 0.6805 -2.450 0.01545 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_Tsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -15.383 -2.606 -2.606 0.000 58.297   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 13.053 3.876 3.367 0.000971 \*\*\*  
## SpeciesGmed -13.052 6.714 -1.944 0.053810 .   
## SpeciesGff -5.453 7.423 -0.735 0.463775   
## SpeciesGb -4.119 6.250 -0.659 0.510988   
## SpeciesGa -7.844 5.328 -1.472 0.143098   
## SpeciesGt -13.053 4.433 -2.945 0.003765 \*\*   
## SpeciesGpp -13.053 11.629 -1.122 0.263532   
## SpeciesGpg -10.447 4.081 -2.560 0.011477 \*   
## SpeciesGp 2.330 4.555 0.512 0.609720   
## SpeciesGmsm -13.053 6.250 -2.088 0.038511 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 120.2084)  
##   
## Null deviance: 21742 on 155 degrees of freedom  
## Residual deviance: 17550 on 146 degrees of freedom  
## AIC: 1201.5  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.069e-14 4.970e-01 0.000 1.0000   
## SpeciesGmm -9.375e-15 6.335e-01 0.000 1.0000   
## SpeciesGmed 1.667e+00 7.455e-01 2.237 0.0268 \*  
## SpeciesGff 1.307e+00 8.115e-01 1.610 0.1095   
## SpeciesGb -2.087e-14 7.028e-01 0.000 1.0000   
## SpeciesGa 2.100e-01 6.198e-01 0.339 0.7352   
## SpeciesGt 1.012e-01 5.427e-01 0.186 0.8524   
## SpeciesGpp -1.159e-14 1.217e+00 0.000 1.0000   
## SpeciesGpg -1.043e-14 5.135e-01 0.000 1.0000   
## SpeciesGp 9.819e-01 5.530e-01 1.776 0.0779 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.9819 0.2425 4.049 8.31e-05 \*\*\*  
## SpeciesGmsm -0.9819 0.5530 -1.776 0.077870 .   
## SpeciesGmm -0.9819 0.4617 -2.127 0.035125 \*   
## SpeciesGmed 0.6856 0.6062 1.131 0.259953   
## SpeciesGff 0.3248 0.6859 0.473 0.636567   
## SpeciesGb -0.9819 0.5530 -1.776 0.077870 .   
## SpeciesGa -0.7719 0.4427 -1.743 0.083353 .   
## SpeciesGt -0.8808 0.3260 -2.701 0.007723 \*\*   
## SpeciesGpp -0.9819 1.1374 -0.863 0.389398   
## SpeciesGpg -0.9819 0.2748 -3.574 0.000477 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.378e-16 1.292e-01 0.000 1.000000   
## SpeciesGp 9.819e-01 2.748e-01 3.574 0.000477 \*\*\*  
## SpeciesGmsm 1.119e-15 5.135e-01 0.000 1.000000   
## SpeciesGmm 9.117e-16 4.136e-01 0.000 1.000000   
## SpeciesGmed 1.668e+00 5.704e-01 2.923 0.004018 \*\*   
## SpeciesGff 1.307e+00 6.545e-01 1.997 0.047733 \*   
## SpeciesGb 8.408e-16 5.135e-01 0.000 1.000000   
## SpeciesGa 2.100e-01 3.923e-01 0.535 0.593252   
## SpeciesGt 1.012e-01 2.533e-01 0.399 0.690275   
## SpeciesGpp 1.460e-15 1.119e+00 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.172e-14 1.111e+00 0.000 1.000  
## SpeciesGpg -2.161e-14 1.119e+00 0.000 1.000  
## SpeciesGp 9.819e-01 1.137e+00 0.863 0.389  
## SpeciesGmsm -2.139e-14 1.217e+00 0.000 1.000  
## SpeciesGmm -2.334e-14 1.179e+00 0.000 1.000  
## SpeciesGmed 1.667e+00 1.242e+00 1.342 0.182  
## SpeciesGff 1.307e+00 1.283e+00 1.018 0.310  
## SpeciesGb -2.106e-14 1.217e+00 0.000 1.000  
## SpeciesGa 2.100e-01 1.171e+00 0.179 0.858  
## SpeciesGt 1.012e-01 1.132e+00 0.089 0.929  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_TcTv) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.6675 -0.1012 0.0000 0.0000 9.0181   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1012 0.2179 0.464 0.64323   
## SpeciesGpp -0.1012 1.1324 -0.089 0.92895   
## SpeciesGpg -0.1012 0.2533 -0.399 0.69028   
## SpeciesGp 0.8808 0.3260 2.701 0.00772 \*\*  
## SpeciesGmsm -0.1012 0.5427 -0.186 0.85239   
## SpeciesGmm -0.1012 0.4493 -0.225 0.82218   
## SpeciesGmed 1.5663 0.5968 2.624 0.00960 \*\*  
## SpeciesGff 1.2055 0.6776 1.779 0.07730 .   
## SpeciesGb -0.1012 0.5427 -0.186 0.85239   
## SpeciesGa 0.1088 0.4298 0.253 0.80042   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.234891)  
##   
## Null deviance: 209.26 on 155 degrees of freedom  
## Residual deviance: 180.29 on 146 degrees of freedom  
## AIC: 487.29  
##   
## Number of Fisher Scoring iterations: 2

#========= Glm TcTz per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.280e-15 9.024e-01 0.000 1.00000   
## SpeciesGt 2.742e+00 1.047e+00 2.619 0.00975 \*\*  
## SpeciesGpp 6.146e-15 2.854e+00 0.000 1.00000   
## SpeciesGpg 2.554e-02 9.557e-01 0.027 0.97872   
## SpeciesGp 1.648e-01 1.079e+00 0.153 0.87880   
## SpeciesGmsm 7.560e-01 1.510e+00 0.501 0.61738   
## SpeciesGmm -7.380e-16 1.316e+00 0.000 1.00000   
## SpeciesGmed 1.665e+00 1.627e+00 1.023 0.30780   
## SpeciesGff 6.533e-01 1.805e+00 0.362 0.71789   
## SpeciesGb -3.251e-16 1.510e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.229e-15 1.211e+00 0.000 1.0000   
## SpeciesGa 2.897e-15 1.510e+00 0.000 1.0000   
## SpeciesGt 2.742e+00 1.322e+00 2.074 0.0398 \*  
## SpeciesGpp 1.610e-15 2.966e+00 0.000 1.0000   
## SpeciesGpg 2.554e-02 1.251e+00 0.020 0.9837   
## SpeciesGp 1.648e-01 1.347e+00 0.122 0.9028   
## SpeciesGmsm 7.560e-01 1.712e+00 0.442 0.6595   
## SpeciesGmm 3.953e-15 1.543e+00 0.000 1.0000   
## SpeciesGmed 1.665e+00 1.816e+00 0.917 0.3608   
## SpeciesGff 6.533e-01 1.977e+00 0.330 0.7415   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.6533 1.5631 0.418 0.677  
## SpeciesGb -0.6533 1.9771 -0.330 0.742  
## SpeciesGa -0.6533 1.8049 -0.362 0.718  
## SpeciesGt 2.0890 1.6508 1.265 0.208  
## SpeciesGpp -0.6533 3.1261 -0.209 0.835  
## SpeciesGpg -0.6278 1.5944 -0.394 0.694  
## SpeciesGp -0.4886 1.6710 -0.292 0.770  
## SpeciesGmsm 0.1027 1.9771 0.052 0.959  
## SpeciesGmm -0.6533 1.8329 -0.356 0.722  
## SpeciesGmed 1.0117 2.0677 0.489 0.625  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.665 1.354 1.230 0.221  
## SpeciesGff -1.012 2.068 -0.489 0.625  
## SpeciesGb -1.665 1.816 -0.917 0.361  
## SpeciesGa -1.665 1.627 -1.023 0.308  
## SpeciesGt 1.077 1.454 0.741 0.460  
## SpeciesGpp -1.665 3.027 -0.550 0.583  
## SpeciesGpg -1.639 1.390 -1.180 0.240  
## SpeciesGp -1.500 1.477 -1.016 0.311  
## SpeciesGmsm -0.909 1.816 -0.501 0.617  
## SpeciesGmm -1.665 1.658 -1.004 0.317  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -4.898e-15 9.572e-01 0.000 1.0000   
## SpeciesGmed 1.665e+00 1.658e+00 1.004 0.3169   
## SpeciesGff 6.533e-01 1.833e+00 0.356 0.7220   
## SpeciesGb 8.380e-15 1.543e+00 0.000 1.0000   
## SpeciesGa 8.026e-15 1.316e+00 0.000 1.0000   
## SpeciesGt 2.742e+00 1.095e+00 2.505 0.0133 \*  
## SpeciesGpp 4.068e-15 2.872e+00 0.000 1.0000   
## SpeciesGpg 2.554e-02 1.008e+00 0.025 0.9798   
## SpeciesGp 1.648e-01 1.125e+00 0.146 0.8837   
## SpeciesGmsm 7.560e-01 1.543e+00 0.490 0.6250   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.7560 1.2107 0.624 0.533  
## SpeciesGmm -0.7560 1.5434 -0.490 0.625  
## SpeciesGmed 0.9090 1.8161 0.501 0.617  
## SpeciesGff -0.1027 1.9771 -0.052 0.959  
## SpeciesGb -0.7560 1.7123 -0.442 0.659  
## SpeciesGa -0.7560 1.5101 -0.501 0.617  
## SpeciesGt 1.9863 1.3221 1.502 0.135  
## SpeciesGpp -0.7560 2.9657 -0.255 0.799  
## SpeciesGpg -0.7305 1.2510 -0.584 0.560  
## SpeciesGp -0.5912 1.3472 -0.439 0.661  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1648 0.5908 0.279 0.78073   
## SpeciesGmsm 0.5912 1.3472 0.439 0.66141   
## SpeciesGmm -0.1648 1.1248 -0.146 0.88375   
## SpeciesGmed 1.5002 1.4770 1.016 0.31142   
## SpeciesGff 0.4886 1.6710 0.292 0.77041   
## SpeciesGb -0.1648 1.3472 -0.122 0.90283   
## SpeciesGa -0.1648 1.0786 -0.153 0.87880   
## SpeciesGt 2.5775 0.7943 3.245 0.00146 \*\*  
## SpeciesGpp -0.1648 2.7710 -0.059 0.95267   
## SpeciesGpg -0.1392 0.6694 -0.208 0.83553   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.02554 0.31472 0.081 0.935   
## SpeciesGp 0.13922 0.66938 0.208 0.836   
## SpeciesGmsm 0.73046 1.25098 0.584 0.560   
## SpeciesGmm -0.02554 1.00759 -0.025 0.980   
## SpeciesGmed 1.63946 1.38976 1.180 0.240   
## SpeciesGff 0.62779 1.59444 0.394 0.694   
## SpeciesGb -0.02554 1.25098 -0.020 0.984   
## SpeciesGa -0.02554 0.95574 -0.027 0.979   
## SpeciesGt 2.71677 0.61722 4.402 2.06e-05 \*\*\*  
## SpeciesGpp -0.02554 2.72555 -0.009 0.993   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 9.533e-15 2.707e+00 0.000 1.000  
## SpeciesGpg 2.554e-02 2.726e+00 0.009 0.993  
## SpeciesGp 1.648e-01 2.771e+00 0.059 0.953  
## SpeciesGmsm 7.560e-01 2.966e+00 0.255 0.799  
## SpeciesGmm -1.287e-14 2.872e+00 0.000 1.000  
## SpeciesGmed 1.665e+00 3.027e+00 0.550 0.583  
## SpeciesGff 6.533e-01 3.126e+00 0.209 0.835  
## SpeciesGb 2.041e-15 2.966e+00 0.000 1.000  
## SpeciesGa 3.077e-15 2.854e+00 0.000 1.000  
## SpeciesGt 2.742e+00 2.759e+00 0.994 0.322  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_TcTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7423 -0.1648 -0.0255 -0.0255 19.4777   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.7423 0.5309 5.165 7.75e-07 \*\*\*  
## SpeciesGpp -2.7423 2.7589 -0.994 0.32187   
## SpeciesGpg -2.7168 0.6172 -4.402 2.06e-05 \*\*\*  
## SpeciesGp -2.5775 0.7943 -3.245 0.00146 \*\*   
## SpeciesGmsm -1.9863 1.3221 -1.502 0.13514   
## SpeciesGmm -2.7423 1.0946 -2.505 0.01333 \*   
## SpeciesGmed -1.0773 1.4541 -0.741 0.45995   
## SpeciesGff -2.0890 1.6508 -1.265 0.20773   
## SpeciesGb -2.7423 1.3221 -2.074 0.03981 \*   
## SpeciesGa -2.7423 1.0470 -2.619 0.00975 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.329568)  
##   
## Null deviance: 1230.7 on 155 degrees of freedom  
## Residual deviance: 1070.1 on 146 degrees of freedom  
## AIC: 765.11  
##   
## Number of Fisher Scoring iterations: 2

#======= Glm TcTsg per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.40444 0.85318 0.474 0.636178   
## SpeciesGt -0.40444 0.98990 -0.409 0.683452   
## SpeciesGpp -0.40444 2.69800 -0.150 0.881046   
## SpeciesGpg -0.34566 0.90358 -0.383 0.702612   
## SpeciesGp 3.96508 1.01975 3.888 0.000153 \*\*\*  
## SpeciesGmsm -0.40444 1.42765 -0.283 0.777353   
## SpeciesGmm 1.32806 1.24372 1.068 0.287368   
## SpeciesGmed -0.40444 1.53810 -0.263 0.792959   
## SpeciesGff -0.05111 1.70637 -0.030 0.976145   
## SpeciesGb -0.40444 1.42765 -0.283 0.777353   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.066e-14 1.145e+00 0.000 1.000000   
## SpeciesGa 4.044e-01 1.428e+00 0.283 0.777353   
## SpeciesGt 6.928e-15 1.250e+00 0.000 1.000000   
## SpeciesGpp 1.215e-14 2.804e+00 0.000 1.000000   
## SpeciesGpg 5.878e-02 1.183e+00 0.050 0.960427   
## SpeciesGp 4.370e+00 1.274e+00 3.431 0.000783 \*\*\*  
## SpeciesGmsm 1.055e-14 1.619e+00 0.000 1.000000   
## SpeciesGmm 1.733e+00 1.459e+00 1.187 0.237030   
## SpeciesGmed 1.015e-14 1.717e+00 0.000 1.000000   
## SpeciesGff 3.533e-01 1.869e+00 0.189 0.850335   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.35333 1.47776 0.239 0.8114   
## SpeciesGb -0.35333 1.86923 -0.189 0.8503   
## SpeciesGa 0.05111 1.70637 0.030 0.9761   
## SpeciesGt -0.35333 1.56069 -0.226 0.8212   
## SpeciesGpp -0.35333 2.95551 -0.120 0.9050   
## SpeciesGpg -0.29455 1.50741 -0.195 0.8454   
## SpeciesGp 4.01619 1.57979 2.542 0.0121 \*  
## SpeciesGmsm -0.35333 1.86923 -0.189 0.8503   
## SpeciesGmm 1.37917 1.73282 0.796 0.4274   
## SpeciesGmed -0.35333 1.95489 -0.181 0.8568   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.347e-14 1.280e+00 0.000 1.00000   
## SpeciesGff 3.533e-01 1.955e+00 0.181 0.85682   
## SpeciesGb -1.359e-14 1.717e+00 0.000 1.00000   
## SpeciesGa 4.044e-01 1.538e+00 0.263 0.79296   
## SpeciesGt -9.192e-15 1.375e+00 0.000 1.00000   
## SpeciesGpp -2.467e-15 2.862e+00 0.000 1.00000   
## SpeciesGpg 5.878e-02 1.314e+00 0.045 0.96438   
## SpeciesGp 4.370e+00 1.396e+00 3.129 0.00212 \*\*  
## SpeciesGmsm -1.678e-14 1.717e+00 0.000 1.00000   
## SpeciesGmm 1.732e+00 1.567e+00 1.105 0.27083   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.7325 0.9049 1.914 0.0575 .  
## SpeciesGmed -1.7325 1.5674 -1.105 0.2708   
## SpeciesGff -1.3792 1.7328 -0.796 0.4274   
## SpeciesGb -1.7325 1.4592 -1.187 0.2370   
## SpeciesGa -1.3281 1.2437 -1.068 0.2874   
## SpeciesGt -1.7325 1.0348 -1.674 0.0962 .  
## SpeciesGpp -1.7325 2.7148 -0.638 0.5244   
## SpeciesGpg -1.6737 0.9526 -1.757 0.0810 .  
## SpeciesGp 2.6370 1.0634 2.480 0.0143 \*  
## SpeciesGmsm -1.7325 1.4592 -1.187 0.2370   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.434e-14 1.145e+00 0.000 1.000000   
## SpeciesGmm 1.732e+00 1.459e+00 1.187 0.237030   
## SpeciesGmed -4.307e-14 1.717e+00 0.000 1.000000   
## SpeciesGff 3.533e-01 1.869e+00 0.189 0.850335   
## SpeciesGb 3.345e-14 1.619e+00 0.000 1.000000   
## SpeciesGa 4.044e-01 1.428e+00 0.283 0.777353   
## SpeciesGt -4.455e-14 1.250e+00 0.000 1.000000   
## SpeciesGpp -3.863e-14 2.804e+00 0.000 1.000000   
## SpeciesGpg 5.878e-02 1.183e+00 0.050 0.960427   
## SpeciesGp 4.370e+00 1.274e+00 3.431 0.000783 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.3695 0.5585 7.823 9.51e-13 \*\*\*  
## SpeciesGmsm -4.3695 1.2737 -3.431 0.000783 \*\*\*  
## SpeciesGmm -2.6370 1.0634 -2.480 0.014285 \*   
## SpeciesGmed -4.3695 1.3963 -3.129 0.002117 \*\*   
## SpeciesGff -4.0162 1.5798 -2.542 0.012057 \*   
## SpeciesGb -4.3695 1.2737 -3.431 0.000783 \*\*\*  
## SpeciesGa -3.9651 1.0197 -3.888 0.000153 \*\*\*  
## SpeciesGt -4.3695 0.7510 -5.819 3.61e-08 \*\*\*  
## SpeciesGpp -4.3695 2.6198 -1.668 0.097480 .   
## SpeciesGpg -4.3107 0.6328 -6.812 2.34e-10 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.05878 0.29754 0.198 0.844   
## SpeciesGp 4.31074 0.63285 6.812 2.34e-10 \*\*\*  
## SpeciesGmsm -0.05878 1.18271 -0.050 0.960   
## SpeciesGmm 1.67372 0.95260 1.757 0.081 .   
## SpeciesGmed -0.05878 1.31391 -0.045 0.964   
## SpeciesGff 0.29455 1.50741 0.195 0.845   
## SpeciesGb -0.05878 1.18271 -0.050 0.960   
## SpeciesGa 0.34566 0.90358 0.383 0.703   
## SpeciesGt -0.05878 0.58353 -0.101 0.920   
## SpeciesGpp -0.05878 2.57679 -0.023 0.982   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.328e-14 2.560e+00 0.000 1.0000   
## SpeciesGpg 5.878e-02 2.577e+00 0.023 0.9818   
## SpeciesGp 4.370e+00 2.620e+00 1.668 0.0975 .  
## SpeciesGmsm 3.316e-14 2.804e+00 0.000 1.0000   
## SpeciesGmm 1.733e+00 2.715e+00 0.638 0.5244   
## SpeciesGmed 2.598e-14 2.862e+00 0.000 1.0000   
## SpeciesGff 3.533e-01 2.956e+00 0.120 0.9050   
## SpeciesGb 3.016e-14 2.804e+00 0.000 1.0000   
## SpeciesGa 4.044e-01 2.698e+00 0.150 0.8810   
## SpeciesGt 3.394e-14 2.608e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_TcTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.3695 -0.0588 -0.0588 0.0000 16.7605   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.501e-15 5.020e-01 0.000 1.0000   
## SpeciesGpp -8.058e-15 2.608e+00 0.000 1.0000   
## SpeciesGpg 5.878e-02 5.835e-01 0.101 0.9199   
## SpeciesGp 4.370e+00 7.510e-01 5.819 3.61e-08 \*\*\*  
## SpeciesGmsm 1.727e-14 1.250e+00 0.000 1.0000   
## SpeciesGmm 1.733e+00 1.035e+00 1.674 0.0962 .   
## SpeciesGmed -1.328e-15 1.375e+00 0.000 1.0000   
## SpeciesGff 3.533e-01 1.561e+00 0.226 0.8212   
## SpeciesGb 2.057e-15 1.250e+00 0.000 1.0000   
## SpeciesGa 4.044e-01 9.899e-01 0.409 0.6835   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.551301)  
##   
## Null deviance: 1299.26 on 155 degrees of freedom  
## Residual deviance: 956.49 on 146 degrees of freedom  
## AIC: 747.6  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TvTsg per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.034e-14 2.568e+00 0.000 1.000  
## SpeciesGt 1.039e-14 2.979e+00 0.000 1.000  
## SpeciesGpp 1.114e-14 8.120e+00 0.000 1.000  
## SpeciesGpg 3.798e+00 2.720e+00 1.397 0.165  
## SpeciesGp 1.129e-01 3.069e+00 0.037 0.971  
## SpeciesGmsm 7.500e-15 4.297e+00 0.000 1.000  
## SpeciesGmm 7.713e-01 3.743e+00 0.206 0.837  
## SpeciesGmed 8.639e-15 4.629e+00 0.000 1.000  
## SpeciesGff 9.359e-15 5.136e+00 0.000 1.000  
## SpeciesGb 4.000e-01 4.297e+00 0.093 0.926  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.4000 3.4452 0.116 0.908  
## SpeciesGa -0.4000 4.2969 -0.093 0.926  
## SpeciesGt -0.4000 3.7619 -0.106 0.915  
## SpeciesGpp -0.4000 8.4390 -0.047 0.962  
## SpeciesGpg 3.3980 3.5597 0.955 0.341  
## SpeciesGp -0.2871 3.8335 -0.075 0.940  
## SpeciesGmsm -0.4000 4.8723 -0.082 0.935  
## SpeciesGmm 0.3713 4.3918 0.085 0.933  
## SpeciesGmed -0.4000 5.1678 -0.077 0.938  
## SpeciesGff -0.4000 5.6260 -0.071 0.943  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 9.444e-16 4.448e+00 0.000 1.000  
## SpeciesGb 4.000e-01 5.626e+00 0.071 0.943  
## SpeciesGa -1.643e-15 5.136e+00 0.000 1.000  
## SpeciesGt 4.263e-15 4.697e+00 0.000 1.000  
## SpeciesGpp 2.676e-15 8.896e+00 0.000 1.000  
## SpeciesGpg 3.798e+00 4.537e+00 0.837 0.404  
## SpeciesGp 1.129e-01 4.755e+00 0.024 0.981  
## SpeciesGmsm -4.013e-16 5.626e+00 0.000 1.000  
## SpeciesGmm 7.712e-01 5.215e+00 0.148 0.883  
## SpeciesGmed -6.360e-17 5.884e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 5.642e-15 3.852e+00 0.000 1.000  
## SpeciesGff -3.020e-15 5.884e+00 0.000 1.000  
## SpeciesGb 4.000e-01 5.168e+00 0.077 0.938  
## SpeciesGa 8.658e-16 4.629e+00 0.000 1.000  
## SpeciesGt -1.613e-15 4.138e+00 0.000 1.000  
## SpeciesGpp -7.583e-15 8.613e+00 0.000 1.000  
## SpeciesGpg 3.798e+00 3.955e+00 0.960 0.338  
## SpeciesGp 1.129e-01 4.203e+00 0.027 0.979  
## SpeciesGmsm 2.777e-15 5.168e+00 0.000 1.000  
## SpeciesGmm 7.713e-01 4.718e+00 0.163 0.870  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.7713 2.7237 0.283 0.777  
## SpeciesGmed -0.7712 4.7176 -0.163 0.870  
## SpeciesGff -0.7713 5.2155 -0.148 0.883  
## SpeciesGb -0.3713 4.3918 -0.085 0.933  
## SpeciesGa -0.7713 3.7433 -0.206 0.837  
## SpeciesGt -0.7713 3.1146 -0.248 0.805  
## SpeciesGpp -0.7713 8.1710 -0.094 0.925  
## SpeciesGpg 3.0267 2.8671 1.056 0.293  
## SpeciesGp -0.6584 3.2007 -0.206 0.837  
## SpeciesGmsm -0.7712 4.3918 -0.176 0.861  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 3.253e-15 3.445e+00 0.000 1.000  
## SpeciesGmm 7.712e-01 4.392e+00 0.176 0.861  
## SpeciesGmed 2.893e-15 5.168e+00 0.000 1.000  
## SpeciesGff 1.366e-15 5.626e+00 0.000 1.000  
## SpeciesGb 4.000e-01 4.872e+00 0.082 0.935  
## SpeciesGa 5.838e-15 4.297e+00 0.000 1.000  
## SpeciesGt -3.081e-15 3.762e+00 0.000 1.000  
## SpeciesGpp 4.463e-15 8.439e+00 0.000 1.000  
## SpeciesGpg 3.798e+00 3.560e+00 1.067 0.288  
## SpeciesGp 1.129e-01 3.833e+00 0.029 0.977  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1129 1.6811 0.067 0.947   
## SpeciesGmsm -0.1129 3.8335 -0.029 0.977   
## SpeciesGmm 0.6584 3.2007 0.206 0.837   
## SpeciesGmed -0.1129 4.2027 -0.027 0.979   
## SpeciesGff -0.1129 4.7548 -0.024 0.981   
## SpeciesGb 0.2871 3.8335 0.075 0.940   
## SpeciesGa -0.1129 3.0692 -0.037 0.971   
## SpeciesGt -0.1129 2.2602 -0.050 0.960   
## SpeciesGpp -0.1129 7.8850 -0.014 0.989   
## SpeciesGpg 3.6851 1.9047 1.935 0.055 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.7980 0.8955 4.241 3.93e-05 \*\*\*  
## SpeciesGp -3.6851 1.9047 -1.935 0.0550 .   
## SpeciesGmsm -3.7980 3.5597 -1.067 0.2878   
## SpeciesGmm -3.0267 2.8671 -1.056 0.2929   
## SpeciesGmed -3.7980 3.9546 -0.960 0.3384   
## SpeciesGff -3.7980 4.5370 -0.837 0.4039   
## SpeciesGb -3.3980 3.5597 -0.955 0.3414   
## SpeciesGa -3.7980 2.7196 -1.397 0.1647   
## SpeciesGt -3.7980 1.7563 -2.162 0.0322 \*   
## SpeciesGpp -3.7980 7.7556 -0.490 0.6251   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -3.783e-14 7.704e+00 0.000 1.000  
## SpeciesGpg 3.798e+00 7.756e+00 0.490 0.625  
## SpeciesGp 1.129e-01 7.885e+00 0.014 0.989  
## SpeciesGmsm 3.857e-14 8.439e+00 0.000 1.000  
## SpeciesGmm 7.713e-01 8.171e+00 0.094 0.925  
## SpeciesGmed 3.815e-14 8.613e+00 0.000 1.000  
## SpeciesGff 3.867e-14 8.896e+00 0.000 1.000  
## SpeciesGb 4.000e-01 8.439e+00 0.047 0.962  
## SpeciesGa 3.820e-14 8.120e+00 0.000 1.000  
## SpeciesGt 3.620e-14 7.850e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.177e-15 1.511e+00 0.000 1.0000   
## SpeciesGpp -7.574e-15 7.850e+00 0.000 1.0000   
## SpeciesGpg 3.798e+00 1.756e+00 2.162 0.0322 \*  
## SpeciesGp 1.129e-01 2.260e+00 0.050 0.9602   
## SpeciesGmsm -1.919e-15 3.762e+00 0.000 1.0000   
## SpeciesGmm 7.712e-01 3.115e+00 0.248 0.8048   
## SpeciesGmed 1.193e-15 4.138e+00 0.000 1.0000   
## SpeciesGff -1.097e-15 4.697e+00 0.000 1.0000   
## SpeciesGb 4.000e-01 3.762e+00 0.106 0.9155   
## SpeciesGa -1.675e-15 2.979e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

#========= Glm TvTz per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -5.120e-15 3.029e+00 0.000 1.00000   
## SpeciesGt 9.313e+00 3.515e+00 2.650 0.00894 \*\*  
## SpeciesGpp -2.653e-14 9.579e+00 0.000 1.00000   
## SpeciesGpg 5.265e-01 3.208e+00 0.164 0.86987   
## SpeciesGp 1.162e-01 3.621e+00 0.032 0.97444   
## SpeciesGmsm 1.251e-15 5.069e+00 0.000 1.00000   
## SpeciesGmm 3.460e-16 4.416e+00 0.000 1.00000   
## SpeciesGmed 8.325e-01 5.461e+00 0.152 0.87904   
## SpeciesGff 1.820e-15 6.058e+00 0.000 1.00000   
## SpeciesGb 1.734e-15 5.069e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.086e-14 4.064e+00 0.000 1.0000   
## SpeciesGa 9.150e-16 5.069e+00 0.000 1.0000   
## SpeciesGt 9.313e+00 4.438e+00 2.099 0.0376 \*  
## SpeciesGpp 7.469e-15 9.955e+00 0.000 1.0000   
## SpeciesGpg 5.265e-01 4.199e+00 0.125 0.9004   
## SpeciesGp 1.162e-01 4.522e+00 0.026 0.9795   
## SpeciesGmsm 1.192e-14 5.747e+00 0.000 1.0000   
## SpeciesGmm 1.196e-14 5.181e+00 0.000 1.0000   
## SpeciesGmed 8.325e-01 6.096e+00 0.137 0.8916   
## SpeciesGff 7.784e-15 6.637e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.247e-14 5.247e+00 0.000 1.000   
## SpeciesGb 2.769e-14 6.637e+00 0.000 1.000   
## SpeciesGa 4.457e-14 6.058e+00 0.000 1.000   
## SpeciesGt 9.313e+00 5.541e+00 1.681 0.095 .  
## SpeciesGpp 3.050e-14 1.049e+01 0.000 1.000   
## SpeciesGpg 5.265e-01 5.352e+00 0.098 0.922   
## SpeciesGp 1.162e-01 5.609e+00 0.021 0.984   
## SpeciesGmsm 3.289e-14 6.637e+00 0.000 1.000   
## SpeciesGmm 3.281e-14 6.152e+00 0.000 1.000   
## SpeciesGmed 8.325e-01 6.941e+00 0.120 0.905   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.8325 4.5438 0.183 0.8549   
## SpeciesGff -0.8325 6.9407 -0.120 0.9047   
## SpeciesGb -0.8325 6.0961 -0.137 0.8916   
## SpeciesGa -0.8325 5.4609 -0.152 0.8790   
## SpeciesGt 8.4806 4.8808 1.738 0.0844 .  
## SpeciesGpp -0.8325 10.1602 -0.082 0.9348   
## SpeciesGpg -0.3060 4.6649 -0.066 0.9478   
## SpeciesGp -0.7163 4.9576 -0.144 0.8853   
## SpeciesGmsm -0.8325 6.0961 -0.137 0.8916   
## SpeciesGmm -0.8325 5.5649 -0.150 0.8813   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.368e-14 3.213e+00 0.000 1.0000   
## SpeciesGmed 8.325e-01 5.565e+00 0.150 0.8813   
## SpeciesGff -1.755e-14 6.152e+00 0.000 1.0000   
## SpeciesGb 2.719e-14 5.181e+00 0.000 1.0000   
## SpeciesGa 2.446e-14 4.416e+00 0.000 1.0000   
## SpeciesGt 9.313e+00 3.674e+00 2.535 0.0123 \*  
## SpeciesGpp 2.175e-14 9.639e+00 0.000 1.0000   
## SpeciesGpg 5.265e-01 3.382e+00 0.156 0.8765   
## SpeciesGp 1.162e-01 3.776e+00 0.031 0.9755   
## SpeciesGmsm 2.285e-14 5.181e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -3.548e-16 4.064e+00 0.000 1.0000   
## SpeciesGmm 9.395e-16 5.181e+00 0.000 1.0000   
## SpeciesGmed 8.325e-01 6.096e+00 0.137 0.8916   
## SpeciesGff -1.379e-15 6.637e+00 0.000 1.0000   
## SpeciesGb -9.120e-15 5.747e+00 0.000 1.0000   
## SpeciesGa -3.064e-16 5.069e+00 0.000 1.0000   
## SpeciesGt 9.313e+00 4.438e+00 2.099 0.0376 \*  
## SpeciesGpp 8.926e-16 9.955e+00 0.000 1.0000   
## SpeciesGpg 5.265e-01 4.199e+00 0.125 0.9004   
## SpeciesGp 1.162e-01 4.522e+00 0.026 0.9795   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1162 1.9831 0.059 0.953358   
## SpeciesGmsm -0.1162 4.5221 -0.026 0.979536   
## SpeciesGmm -0.1162 3.7756 -0.031 0.975492   
## SpeciesGmed 0.7163 4.9576 0.144 0.885316   
## SpeciesGff -0.1162 5.6089 -0.021 0.983501   
## SpeciesGb -0.1162 4.5221 -0.026 0.979536   
## SpeciesGa -0.1162 3.6206 -0.032 0.974443   
## SpeciesGt 9.1969 2.6662 3.449 0.000735 \*\*\*  
## SpeciesGpp -0.1162 9.3014 -0.012 0.990050   
## SpeciesGpg 0.4103 2.2469 0.183 0.855360   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_TvTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.798 -3.798 -0.113 0.000 62.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.7980 0.8955 4.241 3.93e-05 \*\*\*  
## SpeciesGp -3.6851 1.9047 -1.935 0.0550 .   
## SpeciesGmsm -3.7980 3.5597 -1.067 0.2878   
## SpeciesGmm -3.0267 2.8671 -1.056 0.2929   
## SpeciesGmed -3.7980 3.9546 -0.960 0.3384   
## SpeciesGff -3.7980 4.5370 -0.837 0.4039   
## SpeciesGb -3.3980 3.5597 -0.955 0.3414   
## SpeciesGa -3.7980 2.7196 -1.397 0.1647   
## SpeciesGt -3.7980 1.7563 -2.162 0.0322 \*   
## SpeciesGpp -3.7980 7.7556 -0.490 0.6251   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 59.34754)  
##   
## Null deviance: 9193.0 on 155 degrees of freedom  
## Residual deviance: 8664.7 on 146 degrees of freedom  
## AIC: 1091.4  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 7.538e-15 9.088e+00 0.000 1.000  
## SpeciesGpg 5.265e-01 9.149e+00 0.058 0.954  
## SpeciesGp 1.162e-01 9.301e+00 0.012 0.990  
## SpeciesGmsm -1.213e-14 9.955e+00 0.000 1.000  
## SpeciesGmm -3.901e-15 9.639e+00 0.000 1.000  
## SpeciesGmed 8.325e-01 1.016e+01 0.082 0.935  
## SpeciesGff -4.034e-15 1.049e+01 0.000 1.000  
## SpeciesGb 2.052e-14 9.955e+00 0.000 1.000  
## SpeciesGa 4.102e-15 9.579e+00 0.000 1.000  
## SpeciesGt 9.313e+00 9.261e+00 1.006 0.316  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_TvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -9.313 -0.526 -0.526 0.000 74.017   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 9.313 1.782 5.226 5.89e-07 \*\*\*  
## SpeciesGpp -9.313 9.261 -1.006 0.316241   
## SpeciesGpg -8.787 2.072 -4.241 3.93e-05 \*\*\*  
## SpeciesGp -9.197 2.666 -3.449 0.000735 \*\*\*  
## SpeciesGmsm -9.313 4.438 -2.099 0.037570 \*   
## SpeciesGmm -9.313 3.674 -2.535 0.012305 \*   
## SpeciesGmed -8.481 4.881 -1.738 0.084400 .   
## SpeciesGff -9.313 5.541 -1.681 0.094955 .   
## SpeciesGb -9.313 4.438 -2.099 0.037570 \*   
## SpeciesGa -9.313 3.515 -2.650 0.008940 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 82.58299)  
##   
## Null deviance: 13808 on 155 degrees of freedom  
## Residual deviance: 12057 on 146 degrees of freedom  
## AIC: 1142.9  
##   
## Number of Fisher Scoring iterations: 2

#========= glm TzTsg per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -2.651e-15 1.304e+00 0.000 1.000  
## SpeciesGt 2.593e-15 1.513e+00 0.000 1.000  
## SpeciesGpp 2.229e-15 4.125e+00 0.000 1.000  
## SpeciesGpg 1.069e+00 1.381e+00 0.774 0.440  
## SpeciesGp 2.876e-01 1.559e+00 0.184 0.854  
## SpeciesGmsm 2.607e-15 2.183e+00 0.000 1.000  
## SpeciesGmm 1.538e-01 1.901e+00 0.081 0.936  
## SpeciesGmed 2.973e-15 2.352e+00 0.000 1.000  
## SpeciesGff 3.520e-15 2.609e+00 0.000 1.000  
## SpeciesGb 2.438e-15 2.183e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -2.484e-15 1.750e+00 0.000 1.000  
## SpeciesGa 2.501e-15 2.183e+00 0.000 1.000  
## SpeciesGt 4.224e-15 1.911e+00 0.000 1.000  
## SpeciesGpp 0.000e+00 4.287e+00 0.000 1.000  
## SpeciesGpg 1.069e+00 1.808e+00 0.591 0.555  
## SpeciesGp 2.876e-01 1.947e+00 0.148 0.883  
## SpeciesGmsm 1.547e-15 2.475e+00 0.000 1.000  
## SpeciesGmm 1.538e-01 2.231e+00 0.069 0.945  
## SpeciesGmed 1.248e-15 2.625e+00 0.000 1.000  
## SpeciesGff 6.081e-16 2.858e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.242e-15 2.259e+00 0.000 1.000  
## SpeciesGb 2.041e-15 2.858e+00 0.000 1.000  
## SpeciesGa 1.561e-15 2.609e+00 0.000 1.000  
## SpeciesGt 3.087e-15 2.386e+00 0.000 1.000  
## SpeciesGpp 4.460e-16 4.519e+00 0.000 1.000  
## SpeciesGpg 1.069e+00 2.305e+00 0.464 0.643  
## SpeciesGp 2.876e-01 2.415e+00 0.119 0.905  
## SpeciesGmsm 1.591e-15 2.858e+00 0.000 1.000  
## SpeciesGmm 1.538e-01 2.649e+00 0.058 0.954  
## SpeciesGmed 1.272e-15 2.989e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.631e-15 1.957e+00 0.000 1.000  
## SpeciesGff -1.902e-15 2.989e+00 0.000 1.000  
## SpeciesGb -3.082e-15 2.625e+00 0.000 1.000  
## SpeciesGa -6.005e-16 2.352e+00 0.000 1.000  
## SpeciesGt -2.411e-15 2.102e+00 0.000 1.000  
## SpeciesGpp 4.461e-16 4.375e+00 0.000 1.000  
## SpeciesGpg 1.069e+00 2.009e+00 0.532 0.595  
## SpeciesGp 2.876e-01 2.135e+00 0.135 0.893  
## SpeciesGmsm -2.807e-16 2.625e+00 0.000 1.000  
## SpeciesGmm 1.537e-01 2.396e+00 0.064 0.949  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.1537 1.3835 0.111 0.912  
## SpeciesGmed -0.1537 2.3963 -0.064 0.949  
## SpeciesGff -0.1537 2.6493 -0.058 0.954  
## SpeciesGb -0.1537 2.2309 -0.069 0.945  
## SpeciesGa -0.1537 1.9015 -0.081 0.936  
## SpeciesGt -0.1537 1.5821 -0.097 0.923  
## SpeciesGpp -0.1538 4.1506 -0.037 0.971  
## SpeciesGpg 0.9156 1.4564 0.629 0.531  
## SpeciesGp 0.1339 1.6258 0.082 0.934  
## SpeciesGmsm -0.1537 2.2309 -0.069 0.945  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -2.138e-15 1.750e+00 0.000 1.000  
## SpeciesGmm 1.538e-01 2.231e+00 0.069 0.945  
## SpeciesGmed 4.069e-15 2.625e+00 0.000 1.000  
## SpeciesGff 3.102e-15 2.858e+00 0.000 1.000  
## SpeciesGb 1.616e-15 2.475e+00 0.000 1.000  
## SpeciesGa 3.609e-15 2.183e+00 0.000 1.000  
## SpeciesGt 1.790e-15 1.911e+00 0.000 1.000  
## SpeciesGpp 3.236e-15 4.287e+00 0.000 1.000  
## SpeciesGpg 1.069e+00 1.808e+00 0.591 0.555  
## SpeciesGp 2.876e-01 1.947e+00 0.148 0.883  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.2876 0.8539 0.337 0.737  
## SpeciesGmsm -0.2876 1.9473 -0.148 0.883  
## SpeciesGmm -0.1339 1.6258 -0.082 0.934  
## SpeciesGmed -0.2876 2.1348 -0.135 0.893  
## SpeciesGff -0.2876 2.4153 -0.119 0.905  
## SpeciesGb -0.2876 1.9473 -0.148 0.883  
## SpeciesGa -0.2876 1.5591 -0.184 0.854  
## SpeciesGt -0.2876 1.1481 -0.251 0.803  
## SpeciesGpp -0.2876 4.0053 -0.072 0.943  
## SpeciesGpg 0.7817 0.9675 0.808 0.420  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.0693 0.4549 2.351 0.0201 \*  
## SpeciesGp -0.7817 0.9675 -0.808 0.4204   
## SpeciesGmsm -1.0693 1.8082 -0.591 0.5552   
## SpeciesGmm -0.9156 1.4564 -0.629 0.5306   
## SpeciesGmed -1.0693 2.0088 -0.532 0.5953   
## SpeciesGff -1.0693 2.3046 -0.464 0.6433   
## SpeciesGb -1.0693 1.8082 -0.591 0.5552   
## SpeciesGa -1.0693 1.3815 -0.774 0.4401   
## SpeciesGt -1.0693 0.8921 -1.199 0.2326   
## SpeciesGpp -1.0693 3.9396 -0.271 0.7864   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -6.613e-15 3.913e+00 0.000 1.000  
## SpeciesGpg 1.069e+00 3.940e+00 0.271 0.786  
## SpeciesGp 2.876e-01 4.005e+00 0.072 0.943  
## SpeciesGmsm 5.163e-15 4.287e+00 0.000 1.000  
## SpeciesGmm 1.538e-01 4.151e+00 0.037 0.971  
## SpeciesGmed 6.883e-15 4.375e+00 0.000 1.000  
## SpeciesGff 7.462e-15 4.519e+00 0.000 1.000  
## SpeciesGb 7.012e-15 4.287e+00 0.000 1.000  
## SpeciesGa 7.604e-15 4.125e+00 0.000 1.000  
## SpeciesGt 7.297e-15 3.988e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_TzTsg) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.069 -1.069 -0.288 0.000 32.261   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.224e-15 7.674e-01 0.000 1.000  
## SpeciesGpp -2.339e-15 3.988e+00 0.000 1.000  
## SpeciesGpg 1.069e+00 8.921e-01 1.199 0.233  
## SpeciesGp 2.876e-01 1.148e+00 0.251 0.803  
## SpeciesGmsm -2.561e-16 1.911e+00 0.000 1.000  
## SpeciesGmm 1.538e-01 1.582e+00 0.097 0.923  
## SpeciesGmed 5.683e-16 2.102e+00 0.000 1.000  
## SpeciesGff 1.246e-15 2.386e+00 0.000 1.000  
## SpeciesGb -5.310e-16 1.911e+00 0.000 1.000  
## SpeciesGa 5.152e-16 1.513e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 15.31328)  
##   
## Null deviance: 2274.4 on 155 degrees of freedom  
## Residual deviance: 2235.7 on 146 degrees of freedom  
## AIC: 880.05  
##   
## Number of Fisher Scoring iterations: 2

#======== Glm TcTvTz per species  
data$Species <- relevel(data$Species, ref= "Ga")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.422e-16 1.807e-01 0.000 1.000   
## SpeciesGt 2.669e-01 2.097e-01 1.273 0.205   
## SpeciesGpp 3.144e-16 5.715e-01 0.000 1.000   
## SpeciesGpg -2.818e-16 1.914e-01 0.000 1.000   
## SpeciesGp -6.261e-16 2.160e-01 0.000 1.000   
## SpeciesGmsm -6.833e-16 3.024e-01 0.000 1.000   
## SpeciesGmm -1.384e-16 2.634e-01 0.000 1.000   
## SpeciesGmed 1.665e+00 3.258e-01 5.111 9.89e-07 \*\*\*  
## SpeciesGff 6.440e-17 3.614e-01 0.000 1.000   
## SpeciesGb -3.290e-17 3.024e-01 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gb")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.270e-16 2.424e-01 0.000 1.000   
## SpeciesGa -3.526e-16 3.024e-01 0.000 1.000   
## SpeciesGt 2.669e-01 2.647e-01 1.008 0.315   
## SpeciesGpp -2.708e-16 5.939e-01 0.000 1.000   
## SpeciesGpg -9.952e-17 2.505e-01 0.000 1.000   
## SpeciesGp -5.937e-16 2.698e-01 0.000 1.000   
## SpeciesGmsm 1.622e-16 3.429e-01 0.000 1.000   
## SpeciesGmm 4.054e-16 3.091e-01 0.000 1.000   
## SpeciesGmed 1.665e+00 3.637e-01 4.578 9.96e-06 \*\*\*  
## SpeciesGff 1.463e-16 3.959e-01 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gff")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.126e-15 3.130e-01 0.000 1.000   
## SpeciesGb 2.234e-15 3.959e-01 0.000 1.000   
## SpeciesGa 2.337e-15 3.614e-01 0.000 1.000   
## SpeciesGt 2.669e-01 3.306e-01 0.807 0.421   
## SpeciesGpp 1.986e-15 6.260e-01 0.000 1.000   
## SpeciesGpg 1.770e-15 3.193e-01 0.000 1.000   
## SpeciesGp 1.872e-15 3.346e-01 0.000 1.000   
## SpeciesGmsm 2.610e-15 3.959e-01 0.000 1.000   
## SpeciesGmm 2.528e-15 3.670e-01 0.000 1.000   
## SpeciesGmed 1.665e+00 4.141e-01 4.021 9.25e-05 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmed")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.6650 0.2711 6.142 7.33e-09 \*\*\*  
## SpeciesGff -1.6650 0.4141 -4.021 9.25e-05 \*\*\*  
## SpeciesGb -1.6650 0.3637 -4.578 9.96e-06 \*\*\*  
## SpeciesGa -1.6650 0.3258 -5.111 9.89e-07 \*\*\*  
## SpeciesGt -1.3981 0.2912 -4.802 3.86e-06 \*\*\*  
## SpeciesGpp -1.6650 0.6061 -2.747 0.00677 \*\*   
## SpeciesGpg -1.6650 0.2783 -5.983 1.62e-08 \*\*\*  
## SpeciesGp -1.6650 0.2958 -5.630 8.97e-08 \*\*\*  
## SpeciesGmsm -1.6650 0.3637 -4.578 9.96e-06 \*\*\*  
## SpeciesGmm -1.6650 0.3320 -5.015 1.52e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmm")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -4.622e-16 1.917e-01 0.000 1.000   
## SpeciesGmed 1.665e+00 3.320e-01 5.015 1.52e-06 \*\*\*  
## SpeciesGff -3.675e-16 3.670e-01 0.000 1.000   
## SpeciesGb 5.231e-16 3.091e-01 0.000 1.000   
## SpeciesGa 5.924e-16 2.634e-01 0.000 1.000   
## SpeciesGt 2.669e-01 2.192e-01 1.218 0.225   
## SpeciesGpp 7.354e-16 5.750e-01 0.000 1.000   
## SpeciesGpg 7.465e-16 2.018e-01 0.000 1.000   
## SpeciesGp 6.141e-16 2.252e-01 0.000 1.000   
## SpeciesGmsm 6.759e-16 3.091e-01 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gmsm")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.661e-17 2.424e-01 0.000 1.000   
## SpeciesGmm -8.564e-17 3.091e-01 0.000 1.000   
## SpeciesGmed 1.665e+00 3.637e-01 4.578 9.96e-06 \*\*\*  
## SpeciesGff -1.825e-16 3.959e-01 0.000 1.000   
## SpeciesGb -4.594e-16 3.429e-01 0.000 1.000   
## SpeciesGa -6.702e-17 3.024e-01 0.000 1.000   
## SpeciesGt 2.669e-01 2.647e-01 1.008 0.315   
## SpeciesGpp 9.574e-17 5.939e-01 0.000 1.000   
## SpeciesGpg 7.974e-17 2.505e-01 0.000 1.000   
## SpeciesGp 1.998e-16 2.698e-01 0.000 1.000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gp")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -6.205e-16 1.183e-01 0.000 1.0000   
## SpeciesGmsm 7.454e-16 2.698e-01 0.000 1.0000   
## SpeciesGmm 2.017e-17 2.252e-01 0.000 1.0000   
## SpeciesGmed 1.665e+00 2.958e-01 5.630 8.97e-08 \*\*\*  
## SpeciesGff 5.168e-16 3.346e-01 0.000 1.0000   
## SpeciesGb 4.509e-16 2.698e-01 0.000 1.0000   
## SpeciesGa 9.491e-16 2.160e-01 0.000 1.0000   
## SpeciesGt 2.669e-01 1.591e-01 1.678 0.0955 .   
## SpeciesGpp 3.770e-16 5.549e-01 0.000 1.0000   
## SpeciesGpg 1.270e-16 1.340e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpg")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -8.829e-17 6.302e-02 0.000 1.0000   
## SpeciesGp 3.329e-16 1.340e-01 0.000 1.0000   
## SpeciesGmsm 8.195e-16 2.505e-01 0.000 1.0000   
## SpeciesGmm 1.621e-16 2.018e-01 0.000 1.0000   
## SpeciesGmed 1.665e+00 2.783e-01 5.983 1.62e-08 \*\*\*  
## SpeciesGff -4.253e-16 3.193e-01 0.000 1.0000   
## SpeciesGb 2.111e-16 2.505e-01 0.000 1.0000   
## SpeciesGa -3.669e-16 1.914e-01 0.000 1.0000   
## SpeciesGt 2.669e-01 1.236e-01 2.160 0.0324 \*   
## SpeciesGpp -3.353e-16 5.458e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gpp")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.205e-15 5.421e-01 0.000 1.00000   
## SpeciesGpg 1.364e-15 5.458e-01 0.000 1.00000   
## SpeciesGp 7.921e-16 5.549e-01 0.000 1.00000   
## SpeciesGmsm 2.682e-16 5.939e-01 0.000 1.00000   
## SpeciesGmm 1.696e-15 5.750e-01 0.000 1.00000   
## SpeciesGmed 1.665e+00 6.061e-01 2.747 0.00677 \*\*  
## SpeciesGff 1.456e-15 6.260e-01 0.000 1.00000   
## SpeciesGb 1.384e-15 5.939e-01 0.000 1.00000   
## SpeciesGa 2.991e-15 5.715e-01 0.000 1.00000   
## SpeciesGt 2.669e-01 5.525e-01 0.483 0.62971   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

data$Species <- relevel(data$Species, ref= "Gt")  
model1<-glm((Prev\_TcTvTz) ~ Species,data=data, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Species, family = gaussian(), data = data)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.665 0.000 0.000 0.000 5.393   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.2669 0.1063 2.511 0.0131 \*   
## SpeciesGpp -0.2669 0.5525 -0.483 0.6297   
## SpeciesGpg -0.2669 0.1236 -2.160 0.0324 \*   
## SpeciesGp -0.2669 0.1591 -1.678 0.0955 .   
## SpeciesGmsm -0.2669 0.2647 -1.008 0.3150   
## SpeciesGmm -0.2669 0.2192 -1.218 0.2253   
## SpeciesGmed 1.3981 0.2912 4.802 3.86e-06 \*\*\*  
## SpeciesGff -0.2669 0.3306 -0.807 0.4207   
## SpeciesGb -0.2669 0.2647 -1.008 0.3150   
## SpeciesGa -0.2669 0.2097 -1.273 0.2050   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2939072)  
##   
## Null deviance: 54.666 on 155 degrees of freedom  
## Residual deviance: 42.910 on 146 degrees of freedom  
## AIC: 263.35  
##   
## Number of Fisher Scoring iterations: 2

## Statistics for Supplementary table 5

###For Ga  
data\_ga <- subset(data, Species=="Ga")  
data\_ga

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp  
## 27 SAF False Bay Park Ga NI 27 0.00 2.60  
## 41 SAF SAFint Lucia Ga NI 41 0.00 38.60  
## 46 SAF Lower Mkhuze Ga NI 46 0.00 43.40  
## 53 MOZ Reserva Especial de Maputo Ga NI 53 0.00 10.00  
## 59 SAF North eastern KwaZulu-Natal Ga NI 59 5.13 5.13  
## 75 SWA Mlawula Nature Reserve Ga NI 75 0.00 0.00  
## 76 URT Uguja island Ga NI 76 6.67 10.00  
## 132 URT Zanzibar Ga NI 132 16.67 0.00  
## 141 URT Jozani Ga NI 141 0.00 25.00  
## Prev\_Tc Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 27 2.60 0.00 0.00 0.00 0.00 0 0.00 0  
## 41 10.53 0.00 10.53 15.79 0.00 0 1.75 0  
## 46 9.43 1.89 3.77 24.53 1.89 0 1.89 0  
## 53 6.00 0.00 0.00 4.00 0.00 0 0.00 0  
## 59 2.56 0.00 0.00 2.56 0.00 0 0.00 0  
## 75 0.00 0.00 0.00 0.00 0.00 0 0.00 0  
## 76 0.00 6.67 3.33 0.00 0.00 0 0.00 0  
## 132 0.00 0.00 0.00 0.00 0.00 0 0.00 0  
## 141 0.00 0.00 25.00 0.00 0.00 0 0.00 0  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 27 0 0 0  
## 41 0 0 0  
## 46 0 0 0  
## 53 0 0 0  
## 59 0 0 0  
## 75 0 0 0  
## 76 0 0 0  
## 132 0 0 0  
## 141 0 0 0

##Tc  
data\_ga$Country <- relevel(data\_ga$Country, ref= "SAF")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -3.68 4.25 3.15 0.00 -3.72 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.280 1.664 3.774 0.0130 \*  
## CountryURT -6.280 2.542 -2.471 0.0565 .  
## CountrySWA -6.280 3.720 -1.688 0.1522   
## CountryMOZ -0.280 3.720 -0.075 0.9429   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 11.07316)  
##   
## Null deviance: 141.513 on 8 degrees of freedom  
## Residual deviance: 55.366 on 5 degrees of freedom  
## AIC: 51.892  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "MOZ")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -3.68 4.25 3.15 0.00 -3.72 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.000 3.328 1.803 0.131  
## CountrySAF 0.280 3.720 0.075 0.943  
## CountryURT -6.000 3.842 -1.562 0.179  
## CountrySWA -6.000 4.706 -1.275 0.258  
##   
## (Dispersion parameter for gaussian family taken to be 11.07316)  
##   
## Null deviance: 141.513 on 8 degrees of freedom  
## Residual deviance: 55.366 on 5 degrees of freedom  
## AIC: 51.892  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "SWA")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -3.68 4.25 3.15 0.00 -3.72 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -8.882e-16 3.328e+00 0.000 1.000  
## CountryMOZ 6.000e+00 4.706e+00 1.275 0.258  
## CountrySAF 6.280e+00 3.720e+00 1.688 0.152  
## CountryURT 2.051e-15 3.842e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 11.07316)  
##   
## Null deviance: 141.513 on 8 degrees of freedom  
## Residual deviance: 55.366 on 5 degrees of freedom  
## AIC: 51.892  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "URT")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -3.68 4.25 3.15 0.00 -3.72 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -5.606e-17 1.921e+00 0.000 1.0000   
## CountrySWA -2.826e-15 3.842e+00 0.000 1.0000   
## CountryMOZ 6.000e+00 3.842e+00 1.562 0.1792   
## CountrySAF 6.280e+00 2.542e+00 2.471 0.0565 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 11.07316)  
##   
## Null deviance: 141.513 on 8 degrees of freedom  
## Residual deviance: 55.366 on 5 degrees of freedom  
## AIC: 51.892  
##   
## Number of Fisher Scoring iterations: 2

##Tv  
data\_ga$Country <- relevel(data\_ga$Country, ref= "SAF")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -0.4725 -0.4725 1.4175 0.0000 -0.4725 0.0000 4.4467 -2.2233   
## 141   
## -2.2233   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.4725 1.2716 0.372 0.725  
## CountryURT 1.7508 1.9424 0.901 0.409  
## CountrySWA -0.4725 2.8433 -0.166 0.875  
## CountryMOZ -0.4725 2.8433 -0.166 0.875  
##   
## (Dispersion parameter for gaussian family taken to be 6.467668)  
##   
## Null deviance: 39.919 on 8 degrees of freedom  
## Residual deviance: 32.338 on 5 degrees of freedom  
## AIC: 47.052  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "MOZ")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -0.4725 -0.4725 1.4175 0.0000 -0.4725 0.0000 4.4467 -2.2233   
## 141   
## -2.2233   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -3.331e-16 2.543e+00 0.000 1.000  
## CountrySAF 4.725e-01 2.843e+00 0.166 0.875  
## CountryURT 2.223e+00 2.937e+00 0.757 0.483  
## CountrySWA 0.000e+00 3.597e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 6.467668)  
##   
## Null deviance: 39.919 on 8 degrees of freedom  
## Residual deviance: 32.338 on 5 degrees of freedom  
## AIC: 47.052  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "SWA")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -0.4725 -0.4725 1.4175 0.0000 -0.4725 0.0000 4.4467 -2.2233   
## 141   
## -2.2233   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -8.383e-17 2.543e+00 0.000 1.000  
## CountryMOZ 8.832e-17 3.597e+00 0.000 1.000  
## CountrySAF 4.725e-01 2.843e+00 0.166 0.875  
## CountryURT 2.223e+00 2.937e+00 0.757 0.483  
##   
## (Dispersion parameter for gaussian family taken to be 6.467668)  
##   
## Null deviance: 39.919 on 8 degrees of freedom  
## Residual deviance: 32.338 on 5 degrees of freedom  
## AIC: 47.052  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "URT")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -0.4725 -0.4725 1.4175 0.0000 -0.4725 0.0000 4.4467 -2.2233   
## 141   
## -2.2233   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.223 1.468 1.514 0.190  
## CountrySWA -2.223 2.937 -0.757 0.483  
## CountryMOZ -2.223 2.937 -0.757 0.483  
## CountrySAF -1.751 1.942 -0.901 0.409  
##   
## (Dispersion parameter for gaussian family taken to be 6.467668)  
##   
## Null deviance: 39.919 on 8 degrees of freedom  
## Residual deviance: 32.338 on 5 degrees of freedom  
## AIC: 47.052  
##   
## Number of Fisher Scoring iterations: 2

##Tsg  
data\_ga$Country <- relevel(data\_ga$Country, ref= "SAF")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -10.72 5.07 13.81 0.00 -8.16 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 10.720 4.461 2.403 0.0614 .  
## CountryURT -10.720 6.814 -1.573 0.1765   
## CountrySWA -10.720 9.974 -1.075 0.3316   
## CountryMOZ -6.720 9.974 -0.674 0.5304   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 79.585)  
##   
## Null deviance: 629.41 on 8 degrees of freedom  
## Residual deviance: 397.93 on 5 degrees of freedom  
## AIC: 69.642  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "MOZ")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -10.72 5.07 13.81 0.00 -8.16 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 4.000 8.921 0.448 0.673  
## CountrySAF 6.720 9.974 0.674 0.530  
## CountryURT -4.000 10.301 -0.388 0.714  
## CountrySWA -4.000 12.616 -0.317 0.764  
##   
## (Dispersion parameter for gaussian family taken to be 79.585)  
##   
## Null deviance: 629.41 on 8 degrees of freedom  
## Residual deviance: 397.93 on 5 degrees of freedom  
## AIC: 69.642  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "SWA")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -10.72 5.07 13.81 0.00 -8.16 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -3.035e-15 8.921e+00 0.000 1.000  
## CountryMOZ 4.000e+00 1.262e+01 0.317 0.764  
## CountrySAF 1.072e+01 9.974e+00 1.075 0.332  
## CountryURT 7.179e-15 1.030e+01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 79.585)  
##   
## Null deviance: 629.41 on 8 degrees of freedom  
## Residual deviance: 397.93 on 5 degrees of freedom  
## AIC: 69.642  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "URT")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -10.72 5.07 13.81 0.00 -8.16 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.335e-17 5.151e+00 0.000 1.000  
## CountrySWA 3.121e-15 1.030e+01 0.000 1.000  
## CountryMOZ 4.000e+00 1.030e+01 0.388 0.714  
## CountrySAF 1.072e+01 6.814e+00 1.573 0.176  
##   
## (Dispersion parameter for gaussian family taken to be 79.585)  
##   
## Null deviance: 629.41 on 8 degrees of freedom  
## Residual deviance: 397.93 on 5 degrees of freedom  
## AIC: 69.642  
##   
## Number of Fisher Scoring iterations: 2

##TZ  
data\_ga$Country <- relevel(data\_ga$Country, ref= "SAF")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -3.575 6.955 0.195 0.000 -3.575 0.000 -6.113 -9.443 15.557   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 3.575 4.704 0.760 0.482  
## CountryURT 5.868 7.185 0.817 0.451  
## CountrySWA -3.575 10.518 -0.340 0.748  
## CountryMOZ -3.575 10.518 -0.340 0.748  
##   
## (Dispersion parameter for gaussian family taken to be 88.50611)  
##   
## Null deviance: 559.26 on 8 degrees of freedom  
## Residual deviance: 442.53 on 5 degrees of freedom  
## AIC: 70.598  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "MOZ")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -3.575 6.955 0.195 0.000 -3.575 0.000 -6.113 -9.443 15.557   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -8.882e-16 9.408e+00 0.000 1.000  
## CountrySAF 3.575e+00 1.052e+01 0.340 0.748  
## CountryURT 9.443e+00 1.086e+01 0.869 0.424  
## CountrySWA 1.256e-15 1.330e+01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 88.50611)  
##   
## Null deviance: 559.26 on 8 degrees of freedom  
## Residual deviance: 442.53 on 5 degrees of freedom  
## AIC: 70.598  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "SWA")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -3.575 6.955 0.195 0.000 -3.575 0.000 -6.113 -9.443 15.557   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 4.241e-15 9.408e+00 0.000 1.000  
## CountryMOZ -3.533e-15 1.330e+01 0.000 1.000  
## CountrySAF 3.575e+00 1.052e+01 0.340 0.748  
## CountryURT 9.443e+00 1.086e+01 0.869 0.424  
##   
## (Dispersion parameter for gaussian family taken to be 88.50611)  
##   
## Null deviance: 559.26 on 8 degrees of freedom  
## Residual deviance: 442.53 on 5 degrees of freedom  
## AIC: 70.598  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "URT")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -3.575 6.955 0.195 0.000 -3.575 0.000 -6.113 -9.443 15.557   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 9.443 5.432 1.739 0.143  
## CountrySWA -9.443 10.863 -0.869 0.424  
## CountryMOZ -9.443 10.863 -0.869 0.424  
## CountrySAF -5.868 7.185 -0.817 0.451  
##   
## (Dispersion parameter for gaussian family taken to be 88.50611)  
##   
## Null deviance: 559.26 on 8 degrees of freedom  
## Residual deviance: 442.53 on 5 degrees of freedom  
## AIC: 70.598  
##   
## Number of Fisher Scoring iterations: 2

##TcTv  
data\_ga$Country <- relevel(data\_ga$Country, ref= "SAF")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -0.4725 -0.4725 1.4175 0.0000 -0.4725 0.0000 0.0000 0.0000   
## 141   
## 0.0000   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.4725 0.3660 1.291 0.253  
## CountryURT -0.4725 0.5591 -0.845 0.437  
## CountrySWA -0.4725 0.8184 -0.577 0.589  
## CountryMOZ -0.4725 0.8184 -0.577 0.589  
##   
## (Dispersion parameter for gaussian family taken to be 0.535815)  
##   
## Null deviance: 3.1752 on 8 degrees of freedom  
## Residual deviance: 2.6791 on 5 degrees of freedom  
## AIC: 24.635  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "MOZ")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -0.4725 -0.4725 1.4175 0.0000 -0.4725 0.0000 0.0000 0.0000   
## 141   
## 0.0000   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.850e-16 7.320e-01 0.000 1.000  
## CountrySAF 4.725e-01 8.184e-01 0.577 0.589  
## CountryURT 2.027e-16 8.452e-01 0.000 1.000  
## CountrySWA 0.000e+00 1.035e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.535815)  
##   
## Null deviance: 3.1752 on 8 degrees of freedom  
## Residual deviance: 2.6791 on 5 degrees of freedom  
## AIC: 24.635  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "SWA")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -0.4725 -0.4725 1.4175 0.0000 -0.4725 0.0000 0.0000 0.0000   
## 141   
## 0.0000   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -4.463e-16 7.320e-01 0.000 1.000  
## CountryMOZ 3.533e-16 1.035e+00 0.000 1.000  
## CountrySAF 4.725e-01 8.184e-01 0.577 0.589  
## CountryURT 4.487e-16 8.452e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.535815)  
##   
## Null deviance: 3.1752 on 8 degrees of freedom  
## Residual deviance: 2.6791 on 5 degrees of freedom  
## AIC: 24.635  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "URT")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132   
## -0.4725 -0.4725 1.4175 0.0000 -0.4725 0.0000 0.0000 0.0000   
## 141   
## 0.0000   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.405e-16 4.226e-01 0.000 1.000  
## CountrySWA -2.650e-16 8.452e-01 0.000 1.000  
## CountryMOZ 0.000e+00 8.452e-01 0.000 1.000  
## CountrySAF 4.725e-01 5.591e-01 0.845 0.437  
##   
## (Dispersion parameter for gaussian family taken to be 0.535815)  
##   
## Null deviance: 3.1752 on 8 degrees of freedom  
## Residual deviance: 2.6791 on 5 degrees of freedom  
## AIC: 24.635  
##   
## Number of Fisher Scoring iterations: 2

##TcTsg  
data\_ga$Country <- relevel(data\_ga$Country, ref= "SAF")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -0.91 0.84 0.98 0.00 -0.91 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.9100 0.4076 2.233 0.0759 .  
## CountryURT -0.9100 0.6226 -1.462 0.2037   
## CountrySWA -0.9100 0.9113 -0.999 0.3639   
## CountryMOZ -0.9100 0.9113 -0.999 0.3639   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.66444)  
##   
## Null deviance: 5.1624 on 8 degrees of freedom  
## Residual deviance: 3.3222 on 5 degrees of freedom  
## AIC: 26.572  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "MOZ")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -0.91 0.84 0.98 0.00 -0.91 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -2.961e-16 8.151e-01 0.000 1.000  
## CountrySAF 9.100e-01 9.113e-01 0.999 0.364  
## CountryURT 1.013e-16 9.412e-01 0.000 1.000  
## CountrySWA 0.000e+00 1.153e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.66444)  
##   
## Null deviance: 5.1624 on 8 degrees of freedom  
## Residual deviance: 3.3222 on 5 degrees of freedom  
## AIC: 26.572  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "SWA")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -0.91 0.84 0.98 0.00 -0.91 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -5.835e-16 8.151e-01 0.000 1.000  
## CountryMOZ 5.888e-16 1.153e+00 0.000 1.000  
## CountrySAF 9.100e-01 9.113e-01 0.999 0.364  
## CountryURT 7.692e-16 9.412e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.66444)  
##   
## Null deviance: 5.1624 on 8 degrees of freedom  
## Residual deviance: 3.3222 on 5 degrees of freedom  
## AIC: 26.572  
##   
## Number of Fisher Scoring iterations: 2

data\_ga$Country <- relevel(data\_ga$Country, ref= "URT")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_ga, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_ga)  
##   
## Deviance Residuals:   
## 27 41 46 53 59 75 76 132 141   
## -0.91 0.84 0.98 0.00 -0.91 0.00 0.00 0.00 0.00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -5.847e-17 4.706e-01 0.000 1.000  
## CountrySWA 1.108e-16 9.412e-01 0.000 1.000  
## CountryMOZ 4.154e-16 9.412e-01 0.000 1.000  
## CountrySAF 9.100e-01 6.226e-01 1.462 0.204  
##   
## (Dispersion parameter for gaussian family taken to be 0.66444)  
##   
## Null deviance: 5.1624 on 8 degrees of freedom  
## Residual deviance: 3.3222 on 5 degrees of freedom  
## AIC: 26.572  
##   
## Number of Fisher Scoring iterations: 2

#----------------------------------------------------------------------------  
###For Gb  
data\_gb <- subset(data, Species=="Gb")  
data\_gb

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp  
## 7 SAF Phinda Gb NI 7 4.12 0.00  
## 50 SAF Hluhluwe Gb NI 50 0.00 32.00  
## 51 SAF North eastern KwaZulu-Natal Gb NI 51 0.00 4.00  
## 52 MOZ Reserva Especial de Maputo Gb NI 52 14.00 6.00  
## 74 SAF SAFint Lucia Gb NI 74 0.00 43.33  
## Prev\_Tc Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 7 0 0.00 0.00 0.00 0 0 0 0  
## 50 12 2.00 14.00 4.00 0 0 0 0  
## 51 2 0.00 0.00 2.00 0 0 0 0  
## 52 0 2.00 0.00 2.00 0 0 0 0  
## 74 0 3.33 3.33 36.67 0 0 0 0  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 7 0 0 0  
## 50 0 0 0  
## 51 0 0 0  
## 52 2 0 0  
## 74 0 0 0

##Tc  
data\_gb$Country <- relevel(data\_gb$Country, ref= "SAF")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gb, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gb)  
##   
## Deviance Residuals:   
## 7 50 51 52 74   
## -3.5 8.5 -1.5 0.0 -3.5   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 3.500 2.872 1.219 0.310  
## CountryMOZ -3.500 6.423 -0.545 0.624  
##   
## (Dispersion parameter for gaussian family taken to be 33)  
##   
## Null deviance: 108.8 on 4 degrees of freedom  
## Residual deviance: 99.0 on 3 degrees of freedom  
## AIC: 35.118  
##   
## Number of Fisher Scoring iterations: 2

##Tv  
data\_gb$Country <- relevel(data\_gb$Country, ref= "SAF")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gb, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gb)  
##   
## Deviance Residuals:   
## 7 50 51 52 74   
## -1.3325 0.6675 -1.3325 0.0000 1.9975   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.3325 0.8158 1.633 0.201  
## CountryMOZ 0.6675 1.8242 0.366 0.739  
##   
## (Dispersion parameter for gaussian family taken to be 2.662225)  
##   
## Null deviance: 8.3431 on 4 degrees of freedom  
## Residual deviance: 7.9867 on 3 degrees of freedom  
## AIC: 22.531  
##   
## Number of Fisher Scoring iterations: 2

##Tsg  
data\_gb$Country <- relevel(data\_gb$Country, ref= "SAF")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gb, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gb)  
##   
## Deviance Residuals:   
## 7 50 51 52 74   
## -10.668 -6.668 -8.668 0.000 26.003   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 10.668 8.706 1.225 0.308  
## CountryMOZ -8.668 19.467 -0.445 0.686  
##   
## (Dispersion parameter for gaussian family taken to be 303.1689)  
##   
## Null deviance: 969.61 on 4 degrees of freedom  
## Residual deviance: 909.51 on 3 degrees of freedom  
## AIC: 46.207  
##   
## Number of Fisher Scoring iterations: 2

##Tz  
data\_gb$Country <- relevel(data\_gb$Country, ref= "SAF")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gb, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gb)  
##   
## Deviance Residuals:   
## 7 50 51 52 74   
## -4.332 9.668 -4.332 0.000 -1.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 4.332 3.317 1.306 0.283  
## CountryMOZ -4.333 7.416 -0.584 0.600  
##   
## (Dispersion parameter for gaussian family taken to be 44.00223)  
##   
## Null deviance: 147.02 on 4 degrees of freedom  
## Residual deviance: 132.01 on 3 degrees of freedom  
## AIC: 36.556  
##   
## Number of Fisher Scoring iterations: 2

##TvTsg  
data\_gb$Country <- relevel(data\_gb$Country, ref= "SAF")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gb, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gb)  
##   
## Deviance Residuals:   
## 7 50 51 52 74   
## 1.986e-16 1.986e-16 1.986e-16 -8.882e-16 1.986e-16   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.986e-16 2.809e-16 -7.070e-01 0.53   
## CountryMOZ 2.000e+00 6.280e-16 3.185e+15 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 3.155444e-31)  
##   
## Null deviance: 3.2000e+00 on 4 degrees of freedom  
## Residual deviance: 9.4663e-31 on 3 degrees of freedom  
## AIC: -333.52  
##   
## Number of Fisher Scoring iterations: 1

#---------------------------------------------------------------------------  
###For Gff  
data\_gff <- subset(data, Species=="Gff")  
data\_gff

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 16 UGA Buvuma island Gff NI 16 4.26 10.64 3.19 2.13  
## 49 KEN Ikapolok Gff NI 49 39.22 37.25 1.96 9.80  
## 61 KEN Obekai Gff NI 61 0.00 5.26 2.63 2.63  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 16 1.06 3.19 0.00 0.00 1.06 0 0  
## 49 0.00 19.61 3.92 1.96 0.00 0 0  
## 61 0.00 0.00 0.00 0.00 0.00 0 0  
## Prev\_TzTsg Prev\_TcTvTz  
## 16 0 0  
## 49 0 0  
## 61 0 0

##Tv  
data\_gff$Country <- relevel(data\_gff$Country, ref= "KEN")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.000 3.585 -3.585   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.215 3.585 1.734 0.333  
## CountryUGA -4.085 6.209 -0.658 0.630  
##   
## (Dispersion parameter for gaussian family taken to be 25.70445)  
##   
## Null deviance: 36.829 on 2 degrees of freedom  
## Residual deviance: 25.704 on 1 degrees of freedom  
## AIC: 20.958  
##   
## Number of Fisher Scoring iterations: 2

##Tc  
data\_gff$Country <- relevel(data\_gff$Country, ref= "KEN")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.000 -0.335 0.335   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.2950 0.3350 6.851 0.0923 .  
## CountryUGA 0.8950 0.5802 1.542 0.3662   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.22445)  
##   
## Null deviance: 0.75847 on 2 degrees of freedom  
## Residual deviance: 0.22445 on 1 degrees of freedom  
## AIC: 6.7355  
##   
## Number of Fisher Scoring iterations: 2

##Tz  
data\_gff$Country <- relevel(data\_gff$Country, ref= "KEN")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.00e+00 6.41e-17 6.41e-17   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -6.41e-17 6.41e-17 -1.000e+00 0.5   
## CountryUGA 1.06e+00 1.11e-16 9.548e+15 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 8.217301e-33)  
##   
## Null deviance: 7.4907e-01 on 2 degrees of freedom  
## Residual deviance: 8.2173e-33 on 1 degrees of freedom  
## AIC: -210.42  
##   
## Number of Fisher Scoring iterations: 1

##Tsg  
data\_gff$Country <- relevel(data\_gff$Country, ref= "KEN")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.000 9.805 -9.805   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 9.805 9.805 1.00 0.500  
## CountryUGA -6.615 16.983 -0.39 0.764  
##   
## (Dispersion parameter for gaussian family taken to be 192.276)  
##   
## Null deviance: 221.45 on 2 degrees of freedom  
## Residual deviance: 192.28 on 1 degrees of freedom  
## AIC: 26.995  
##   
## Number of Fisher Scoring iterations: 2

##TcTv  
data\_gff$Country <- relevel(data\_gff$Country, ref= "KEN")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.00 1.96 -1.96   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.960 1.960 1.000 0.500  
## CountryUGA -1.960 3.395 -0.577 0.667  
##   
## (Dispersion parameter for gaussian family taken to be 7.6832)  
##   
## Null deviance: 10.2443 on 2 degrees of freedom  
## Residual deviance: 7.6832 on 1 degrees of freedom  
## AIC: 17.335  
##   
## Number of Fisher Scoring iterations: 2

##TcTz  
data\_gff$Country <- relevel(data\_gff$Country, ref= "KEN")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.00 0.98 -0.98   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.980 0.980 1.000 0.500  
## CountryUGA -0.980 1.697 -0.577 0.667  
##   
## (Dispersion parameter for gaussian family taken to be 1.9208)  
##   
## Null deviance: 2.5611 on 2 degrees of freedom  
## Residual deviance: 1.9208 on 1 degrees of freedom  
## AIC: 13.176  
##   
## Number of Fisher Scoring iterations: 2

##TcTsg  
data\_gff$Country <- relevel(data\_gff$Country, ref= "KEN")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gff, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gff)  
##   
## Deviance Residuals:   
## 16 49 61   
## 0.00e+00 6.41e-17 6.41e-17   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -6.41e-17 6.41e-17 -1.000e+00 0.5   
## CountryUGA 1.06e+00 1.11e-16 9.548e+15 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 8.217301e-33)  
##   
## Null deviance: 7.4907e-01 on 2 degrees of freedom  
## Residual deviance: 8.2173e-33 on 1 degrees of freedom  
## AIC: -210.42  
##   
## Number of Fisher Scoring iterations: 1

#----------------------------------------------------------------------  
###For Gmm  
data\_gmm <- subset(data, Species=="Gmm")  
data\_gmm

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 21 KEN Kari Gmm NI 21 63.53 2.35 2.35 0.00  
## 22 URT MaSAFng-URTga Gmm NI 22 76.54 53.09 18.52 1.23  
## 26 ZIM Makuti Gmm NI 26 26.92 91.03 11.54 0.00  
## 93 ZIM Kemukura Gmm NI 93 22.22 5.56 0.00 5.56  
## 100 ZIM Rukomeshi Gmm NI 100 20.00 0.00 0.00 0.00  
## 105 ZIM Mukondore Gmm NI 105 23.08 7.69 7.69 0.00  
## 115 ZIM M. chiuyi Gmm NI 115 11.11 0.00 0.00 0.00  
## 131 ZIM Mushumb Gmm NI 131 0.00 33.33 16.67 0.00  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 21 0.00 0.00 0 0 0.00 0 0.00  
## 22 1.23 18.52 0 0 6.17 0 6.17  
## 26 2.56 69.23 0 0 7.69 0 0.00  
## 93 0.00 0.00 0 0 0.00 0 0.00  
## 100 0.00 0.00 0 0 0.00 0 0.00  
## 105 0.00 0.00 0 0 0.00 0 0.00  
## 115 0.00 0.00 0 0 0.00 0 0.00  
## 131 0.00 16.67 0 0 0.00 0 0.00  
## Prev\_TzTsg Prev\_TcTvTz  
## 21 0.00 0  
## 22 1.23 0  
## 26 0.00 0  
## 93 0.00 0  
## 100 0.00 0  
## 105 0.00 0  
## 115 0.00 0  
## 131 0.00 0

##Tc  
data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 5.557 -5.983 -5.983 1.707 -5.983 10.687   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.983 2.918 2.051 0.0956 .  
## CountryURT 12.537 7.720 1.624 0.1653   
## CountryKEN -3.633 7.720 -0.471 0.6577   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 51.07899)  
##   
## Null deviance: 415.86 on 7 degrees of freedom  
## Residual deviance: 255.39 on 5 degrees of freedom  
## AIC: 58.41  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "KEN")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 5.557 -5.983 -5.983 1.707 -5.983 10.687   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.350 7.147 0.329 0.756  
## CountryZIM 3.633 7.720 0.471 0.658  
## CountryURT 16.170 10.107 1.600 0.171  
##   
## (Dispersion parameter for gaussian family taken to be 51.07899)  
##   
## Null deviance: 415.86 on 7 degrees of freedom  
## Residual deviance: 255.39 on 5 degrees of freedom  
## AIC: 58.41  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 5.557 -5.983 -5.983 1.707 -5.983 10.687   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 18.520 7.147 2.591 0.0488 \*  
## CountryKEN -16.170 10.107 -1.600 0.1705   
## CountryZIM -12.537 7.720 -1.624 0.1653   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 51.07899)  
##   
## Null deviance: 415.86 on 7 degrees of freedom  
## Residual deviance: 255.39 on 5 degrees of freedom  
## AIC: 58.41  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 5.557 -5.983 -5.983 1.707 -5.983 10.687   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.983 2.918 2.051 0.0956 .  
## CountryURT 12.537 7.720 1.624 0.1653   
## CountryKEN -3.633 7.720 -0.471 0.6577   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 51.07899)  
##   
## Null deviance: 415.86 on 7 degrees of freedom  
## Residual deviance: 255.39 on 5 degrees of freedom  
## AIC: 58.41  
##   
## Number of Fisher Scoring iterations: 2

##Tv  
data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.0000 0.0000 -0.9267 4.6333 -0.9267 -0.9267 -0.9267 -0.9267   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.9267 0.9267 1.000 0.363  
## CountryURT 0.3033 2.4517 0.124 0.906  
## CountryKEN -0.9267 2.4517 -0.378 0.721  
##   
## (Dispersion parameter for gaussian family taken to be 5.152267)  
##   
## Null deviance: 26.663 on 7 degrees of freedom  
## Residual deviance: 25.761 on 5 degrees of freedom  
## AIC: 40.058  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "KEN")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.0000 0.0000 -0.9267 4.6333 -0.9267 -0.9267 -0.9267 -0.9267   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -7.850e-16 2.270e+00 0.000 1.000  
## CountryZIM 9.267e-01 2.452e+00 0.378 0.721  
## CountryURT 1.230e+00 3.210e+00 0.383 0.717  
##   
## (Dispersion parameter for gaussian family taken to be 5.152267)  
##   
## Null deviance: 26.663 on 7 degrees of freedom  
## Residual deviance: 25.761 on 5 degrees of freedom  
## AIC: 40.058  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.0000 0.0000 -0.9267 4.6333 -0.9267 -0.9267 -0.9267 -0.9267   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.2300 2.2699 0.542 0.611  
## CountryKEN -1.2300 3.2101 -0.383 0.717  
## CountryZIM -0.3033 2.4517 -0.124 0.906  
##   
## (Dispersion parameter for gaussian family taken to be 5.152267)  
##   
## Null deviance: 26.663 on 7 degrees of freedom  
## Residual deviance: 25.761 on 5 degrees of freedom  
## AIC: 40.058  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.0000 0.0000 -0.9267 4.6333 -0.9267 -0.9267 -0.9267 -0.9267   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.9267 0.9267 1.000 0.363  
## CountryURT 0.3033 2.4517 0.124 0.906  
## CountryKEN -0.9267 2.4517 -0.378 0.721  
##   
## (Dispersion parameter for gaussian family taken to be 5.152267)  
##   
## Null deviance: 26.663 on 7 degrees of freedom  
## Residual deviance: 25.761 on 5 degrees of freedom  
## AIC: 40.058  
##   
## Number of Fisher Scoring iterations: 2

##Tsg  
data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 54.913 -14.317 -14.317 -14.317 -14.317 2.353   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 14.317 11.315 1.265 0.262  
## CountryURT 4.203 29.937 0.140 0.894  
## CountryKEN -14.317 29.937 -0.478 0.653  
##   
## (Dispersion parameter for gaussian family taken to be 768.176)  
##   
## Null deviance: 4050.7 on 7 degrees of freedom  
## Residual deviance: 3840.9 on 5 degrees of freedom  
## AIC: 80.095  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "KEN")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 54.913 -14.317 -14.317 -14.317 -14.317 2.353   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.507e-14 2.772e+01 0.000 1.000  
## CountryZIM 1.432e+01 2.994e+01 0.478 0.653  
## CountryURT 1.852e+01 3.920e+01 0.472 0.656  
##   
## (Dispersion parameter for gaussian family taken to be 768.176)  
##   
## Null deviance: 4050.7 on 7 degrees of freedom  
## Residual deviance: 3840.9 on 5 degrees of freedom  
## AIC: 80.095  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 54.913 -14.317 -14.317 -14.317 -14.317 2.353   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 18.520 27.716 0.668 0.534  
## CountryKEN -18.520 39.196 -0.472 0.656  
## CountryZIM -4.203 29.937 -0.140 0.894  
##   
## (Dispersion parameter for gaussian family taken to be 768.176)  
##   
## Null deviance: 4050.7 on 7 degrees of freedom  
## Residual deviance: 3840.9 on 5 degrees of freedom  
## AIC: 80.095  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 54.913 -14.317 -14.317 -14.317 -14.317 2.353   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 14.317 11.315 1.265 0.262  
## CountryURT 4.203 29.937 0.140 0.894  
## CountryKEN -14.317 29.937 -0.478 0.653  
##   
## (Dispersion parameter for gaussian family taken to be 768.176)  
##   
## Null deviance: 4050.7 on 7 degrees of freedom  
## Residual deviance: 3840.9 on 5 degrees of freedom  
## AIC: 80.095  
##   
## Number of Fisher Scoring iterations: 2

##Tz  
data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.0000 0.0000 2.1333 -0.4267 -0.4267 -0.4267 -0.4267 -0.4267   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.4267 0.4267 1.000 0.363  
## CountryURT 0.8033 1.1289 0.712 0.509  
## CountryKEN -0.4267 1.1289 -0.378 0.721  
##   
## (Dispersion parameter for gaussian family taken to be 1.092267)  
##   
## Null deviance: 6.2710 on 7 degrees of freedom  
## Residual deviance: 5.4613 on 5 degrees of freedom  
## AIC: 27.649  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "KEN")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.0000 0.0000 2.1333 -0.4267 -0.4267 -0.4267 -0.4267 -0.4267   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -7.065e-16 1.045e+00 0.000 1.000  
## CountryZIM 4.267e-01 1.129e+00 0.378 0.721  
## CountryURT 1.230e+00 1.478e+00 0.832 0.443  
##   
## (Dispersion parameter for gaussian family taken to be 1.092267)  
##   
## Null deviance: 6.2710 on 7 degrees of freedom  
## Residual deviance: 5.4613 on 5 degrees of freedom  
## AIC: 27.649  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.0000 0.0000 2.1333 -0.4267 -0.4267 -0.4267 -0.4267 -0.4267   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.2300 1.0451 1.177 0.292  
## CountryKEN -1.2300 1.4780 -0.832 0.443  
## CountryZIM -0.8033 1.1289 -0.712 0.509  
##   
## (Dispersion parameter for gaussian family taken to be 1.092267)  
##   
## Null deviance: 6.2710 on 7 degrees of freedom  
## Residual deviance: 5.4613 on 5 degrees of freedom  
## AIC: 27.649  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.0000 0.0000 2.1333 -0.4267 -0.4267 -0.4267 -0.4267 -0.4267   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.4267 0.4267 1.000 0.363  
## CountryURT 0.8033 1.1289 0.712 0.509  
## CountryKEN -0.4267 1.1289 -0.378 0.721  
##   
## (Dispersion parameter for gaussian family taken to be 1.092267)  
##   
## Null deviance: 6.2710 on 7 degrees of freedom  
## Residual deviance: 5.4613 on 5 degrees of freedom  
## AIC: 27.649  
##   
## Number of Fisher Scoring iterations: 2

##TcTv  
data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0 0 0 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0 0 NA NA  
## CountryURT 0 0 NA NA  
## CountryKEN 0 0 NA NA  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 0 on 7 degrees of freedom  
## Residual deviance: 0 on 5 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "KEN")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0 0 0 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0 0 NA NA  
## CountryZIM 0 0 NA NA  
## CountryURT 0 0 NA NA  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 0 on 7 degrees of freedom  
## Residual deviance: 0 on 5 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0 0 0 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0 0 NA NA  
## CountryKEN 0 0 NA NA  
## CountryZIM 0 0 NA NA  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 0 on 7 degrees of freedom  
## Residual deviance: 0 on 5 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0 0 0 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0 0 NA NA  
## CountryURT 0 0 NA NA  
## CountryKEN 0 0 NA NA  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 0 on 7 degrees of freedom  
## Residual deviance: 0 on 5 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

##TcTsg  
data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 6.408 -1.282 -1.282 -1.282 -1.282 -1.282   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.282 1.282 1.000 0.363  
## CountryURT 4.888 3.391 1.442 0.209  
## CountryKEN -1.282 3.391 -0.378 0.721  
##   
## (Dispersion parameter for gaussian family taken to be 9.856017)  
##   
## Null deviance: 73.193 on 7 degrees of freedom  
## Residual deviance: 49.280 on 5 degrees of freedom  
## AIC: 45.248  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "KEN")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 6.408 -1.282 -1.282 -1.282 -1.282 -1.282   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -5.652e-15 3.139e+00 0.000 1.000  
## CountryZIM 1.282e+00 3.391e+00 0.378 0.721  
## CountryURT 6.170e+00 4.440e+00 1.390 0.223  
##   
## (Dispersion parameter for gaussian family taken to be 9.856017)  
##   
## Null deviance: 73.193 on 7 degrees of freedom  
## Residual deviance: 49.280 on 5 degrees of freedom  
## AIC: 45.248  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 6.408 -1.282 -1.282 -1.282 -1.282 -1.282   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.170 3.139 1.965 0.107  
## CountryKEN -6.170 4.440 -1.390 0.223  
## CountryZIM -4.888 3.391 -1.442 0.209  
##   
## (Dispersion parameter for gaussian family taken to be 9.856017)  
##   
## Null deviance: 73.193 on 7 degrees of freedom  
## Residual deviance: 49.280 on 5 degrees of freedom  
## AIC: 45.248  
##   
## Number of Fisher Scoring iterations: 2

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0.000 0.000 6.408 -1.282 -1.282 -1.282 -1.282 -1.282   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.282 1.282 1.000 0.363  
## CountryURT 4.888 3.391 1.442 0.209  
## CountryKEN -1.282 3.391 -0.378 0.721  
##   
## (Dispersion parameter for gaussian family taken to be 9.856017)  
##   
## Null deviance: 73.193 on 7 degrees of freedom  
## Residual deviance: 49.280 on 5 degrees of freedom  
## AIC: 45.248  
##   
## Number of Fisher Scoring iterations: 2

##TvTsg  
data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0 0 0 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.00 0.00 NA NA   
## CountryURT 6.17 0.00 Inf <2e-16 \*\*\*  
## CountryKEN 0.00 0.00 NA NA   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 33.31 on 7 degrees of freedom  
## Residual deviance: 0.00 on 5 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "KEN")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105   
## 0.000e+00 -8.882e-16 0.000e+00 0.000e+00 0.000e+00 0.000e+00   
## 115 131   
## 0.000e+00 0.000e+00   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.000e+00 3.972e-16 0.000e+00 1   
## CountryZIM 0.000e+00 4.290e-16 0.000e+00 1   
## CountryURT 6.170e+00 5.617e-16 1.098e+16 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.577722e-31)  
##   
## Null deviance: 3.3310e+01 on 7 degrees of freedom  
## Residual deviance: 7.8886e-31 on 5 degrees of freedom  
## AIC: -540.45  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115   
## 4.441e-15 8.882e-16 1.776e-15 1.776e-15 1.776e-15 1.776e-15 1.776e-15   
## 131   
## 1.776e-15   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.170e+00 2.809e-15 2.197e+15 <2e-16 \*\*\*  
## CountryKEN -6.170e+00 3.972e-15 -1.553e+15 <2e-16 \*\*\*  
## CountryZIM -6.170e+00 3.034e-15 -2.034e+15 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 7.888609e-30)  
##   
## Null deviance: 3.3310e+01 on 7 degrees of freedom  
## Residual deviance: 3.9443e-29 on 5 degrees of freedom  
## AIC: -509.15  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115 131   
## 0 0 0 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.00 0.00 NA NA   
## CountryURT 6.17 0.00 Inf <2e-16 \*\*\*  
## CountryKEN 0.00 0.00 NA NA   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 33.31 on 7 degrees of freedom  
## Residual deviance: 0.00 on 5 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

##TzTsg  
data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZAM")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105   
## 1.887e-16 -6.661e-16 7.850e-17 7.850e-17 7.850e-17 7.850e-17   
## 115 131   
## 7.850e-17 7.850e-17   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -7.850e-17 1.312e-16 -5.980e-01 0.576   
## CountryURT 1.230e+00 3.471e-16 3.544e+15 <2e-16 \*\*\*  
## CountryKEN -1.102e-16 3.471e-16 -3.170e-01 0.764   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.032607e-31)  
##   
## Null deviance: 1.3238e+00 on 7 degrees of freedom  
## Residual deviance: 5.1630e-31 on 5 degrees of freedom  
## AIC: -543.84  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "KEN")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105   
## 2.523e-16 4.441e-16 -1.103e-16 -1.103e-16 -1.103e-16 -1.103e-16   
## 115 131   
## -1.103e-16 -1.103e-16   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.523e-16 2.584e-16 -9.760e-01 0.374   
## CountryZIM 3.626e-16 2.791e-16 1.299e+00 0.251   
## CountryURT 1.230e+00 3.654e-16 3.366e+15 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.676913e-32)  
##   
## Null deviance: 1.3238e+00 on 7 degrees of freedom  
## Residual deviance: 3.3385e-31 on 5 degrees of freedom  
## AIC: -547.33  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "URT")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105 115   
## 6.661e-16 6.661e-16 2.220e-16 2.220e-16 2.220e-16 2.220e-16 2.220e-16   
## 131   
## 2.220e-16   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.230e+00 4.865e-16 2.528e+15 <2e-16 \*\*\*  
## CountryKEN -1.230e+00 6.880e-16 -1.788e+15 <2e-16 \*\*\*  
## CountryZIM -1.230e+00 5.255e-16 -2.341e+15 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 2.366583e-31)  
##   
## Null deviance: 1.3238e+00 on 7 degrees of freedom  
## Residual deviance: 1.1833e-30 on 5 degrees of freedom  
## AIC: -537.21  
##   
## Number of Fisher Scoring iterations: 1

data\_gmm$Country <- relevel(data\_gmm$Country, ref= "ZIM")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gmm, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gmm)  
##   
## Deviance Residuals:   
## 21 22 26 93 100 105   
## 1.887e-16 -6.661e-16 7.850e-17 7.850e-17 7.850e-17 7.850e-17   
## 115 131   
## 7.850e-17 7.850e-17   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -7.850e-17 1.312e-16 -5.980e-01 0.576   
## CountryURT 1.230e+00 3.471e-16 3.544e+15 <2e-16 \*\*\*  
## CountryKEN -1.102e-16 3.471e-16 -3.170e-01 0.764   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 1.032607e-31)  
##   
## Null deviance: 1.3238e+00 on 7 degrees of freedom  
## Residual deviance: 5.1630e-31 on 5 degrees of freedom  
## AIC: -543.84  
##   
## Number of Fisher Scoring iterations: 1

#-------------------------------------------------------------------------------  
###For Gp  
data\_gp <- subset(data, Species=="Gp")  
data\_gp

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc  
## 1 ETH Arba minch, nech SAFr Gp NI 1 20.48 20.04 6.10  
## 5 KEN Katotoi Gp NI 5 42.56 88.72 21.54  
## 6 KEN Mwea Gp NI 6 3.08 19.49 7.18  
## 8 ZAM Mfuwe Gp NI 8 2.05 45.21 1.37  
## 9 URT URTzania Gp NI 9 78.77 19.86 6.16  
## 17 KEN Kari Gp NI 17 89.36 2.13 1.06  
## 19 KEN Koibos Gp NI 19 0.00 71.59 15.91  
## 20 KEN Meru nat. parc Gp NI 20 22.99 70.11 29.89  
## 23 KEN Ruma nat. parc Gp NI 23 26.25 17.50 10.00  
## 31 URT MaSAFng-URTga Gp NI 31 66.20 73.24 33.80  
## 38 KEN Emsos Gp NI 38 0.00 93.33 15.00  
## 42 UGA Budaka Gp NI 42 94.55 7.27 1.82  
## 60 ZIM Makuti Gp NI 60 15.79 86.84 7.89  
## 79 UGA Omugo Gp NI 79 100.00 0.00 0.00  
## 81 ZIM Mushumb Gp NI 81 3.85 19.23 3.85  
## 85 UGA Lira Gp NI 85 0.00 16.00 8.00  
## 90 KEN Kiria Gp NI 90 0.00 80.00 55.00  
## 101 KEN Mwea nat. parc Gp NI 101 0.00 13.33 13.33  
## 118 UGA Moyo Gp NI 118 87.50 12.50 0.00  
## 139 ZIM Rukomeshi Gp NI 139 0.00 0.00 0.00  
## 140 ZIM Gokwe Gp NI 140 0.00 0.00 0.00  
## Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 1 0.65 1.09 10.46 0.00 0.00 0.65 0.00  
## 5 15.38 0.51 26.15 6.67 1.54 15.90 1.03  
## 6 0.51 1.03 7.69 1.03 0.51 0.51 0.00  
## 8 0.68 0.68 34.93 0.00 0.00 7.53 0.00  
## 9 2.74 0.68 8.22 0.00 0.00 0.68 0.00  
## 17 0.00 1.06 0.00 0.00 0.00 0.00 0.00  
## 19 9.09 0.00 28.41 0.00 0.00 15.91 0.00  
## 20 4.60 0.00 25.29 0.00 0.00 10.34 0.00  
## 23 2.50 2.50 0.00 1.25 0.00 0.00 0.00  
## 31 0.00 0.00 14.08 0.00 1.41 21.13 1.41  
## 38 8.33 0.00 58.33 1.67 0.00 10.00 0.00  
## 42 0.00 0.00 5.45 0.00 0.00 0.00 0.00  
## 60 0.00 0.00 73.68 0.00 0.00 5.26 0.00  
## 79 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 81 0.00 7.69 3.85 0.00 0.00 3.85 0.00  
## 85 0.00 4.00 4.00 0.00 0.00 0.00 0.00  
## 90 5.00 0.00 10.00 10.00 0.00 0.00 0.00  
## 101 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 118 0.00 0.00 12.50 0.00 0.00 0.00 0.00  
## 139 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## 140 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 1 0.44 0.65 0  
## 5 0.00 0.00 0  
## 6 0.00 1.03 0  
## 8 0.00 0.00 0  
## 9 0.68 0.68 0  
## 17 0.00 0.00 0  
## 19 0.00 2.27 0  
## 20 0.00 0.00 0  
## 23 1.25 0.00 0  
## 31 0.00 1.41 0  
## 38 0.00 0.00 0  
## 42 0.00 0.00 0  
## 60 0.00 0.00 0  
## 79 0.00 0.00 0  
## 81 0.00 0.00 0  
## 85 0.00 0.00 0  
## 90 0.00 0.00 0  
## 101 0.00 0.00 0  
## 118 0.00 0.00 0  
## 139 0.00 0.00 0  
## 140 0.00 0.00 0

##Tc  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -17.708 -3.768 -2.455 2.772 36.232   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.100 12.881 0.474 0.643  
## CountryZIM -3.165 14.401 -0.220 0.829  
## CountryZAM -4.730 18.216 -0.260 0.799  
## CountryUGA -3.645 14.401 -0.253 0.804  
## CountryURT 13.880 15.775 0.880 0.393  
## CountryKEN 12.668 13.577 0.933 0.366  
##   
## (Dispersion parameter for gaussian family taken to be 165.9079)  
##   
## Null deviance: 3859.7 on 20 degrees of freedom  
## Residual deviance: 2488.6 on 15 degrees of freedom  
## AIC: 173.87  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -17.708 -3.768 -2.455 2.772 36.232   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 18.768 4.294 4.371 0.000548 \*\*\*  
## CountryETH -12.668 13.577 -0.933 0.365589   
## CountryZIM -15.833 7.740 -2.046 0.058757 .   
## CountryZAM -17.398 13.577 -1.281 0.219512   
## CountryUGA -16.313 7.740 -2.108 0.052308 .   
## CountryURT 1.212 10.069 0.120 0.905772   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 165.9079)  
##   
## Null deviance: 3859.7 on 20 degrees of freedom  
## Residual deviance: 2488.6 on 15 degrees of freedom  
## AIC: 173.87  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -17.708 -3.768 -2.455 2.772 36.232   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.455 6.440 0.381 0.7084   
## CountryKEN 16.313 7.740 2.108 0.0523 .  
## CountryETH 3.645 14.401 0.253 0.8036   
## CountryZIM 0.480 9.108 0.053 0.9587   
## CountryZAM -1.085 14.401 -0.075 0.9409   
## CountryURT 17.525 11.155 1.571 0.1370   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 165.9079)  
##   
## Null deviance: 3859.7 on 20 degrees of freedom  
## Residual deviance: 2488.6 on 15 degrees of freedom  
## AIC: 173.87  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -17.708 -3.768 -2.455 2.772 36.232   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 19.980 9.108 2.194 0.0444 \*  
## CountryUGA -17.525 11.155 -1.571 0.1370   
## CountryKEN -1.212 10.069 -0.120 0.9058   
## CountryETH -13.880 15.775 -0.880 0.3928   
## CountryZIM -17.045 11.155 -1.528 0.1473   
## CountryZAM -18.610 15.775 -1.180 0.2565   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 165.9079)  
##   
## Null deviance: 3859.7 on 20 degrees of freedom  
## Residual deviance: 2488.6 on 15 degrees of freedom  
## AIC: 173.87  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -17.708 -3.768 -2.455 2.772 36.232   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.935 6.440 0.456 0.6551   
## CountryURT 17.045 11.155 1.528 0.1473   
## CountryUGA -0.480 9.108 -0.053 0.9587   
## CountryKEN 15.833 7.740 2.046 0.0588 .  
## CountryETH 3.165 14.401 0.220 0.8290   
## CountryZAM -1.565 14.401 -0.109 0.9149   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 165.9079)  
##   
## Null deviance: 3859.7 on 20 degrees of freedom  
## Residual deviance: 2488.6 on 15 degrees of freedom  
## AIC: 173.87  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -17.708 -3.768 -2.455 2.772 36.232   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.370 12.881 0.106 0.917  
## CountryZIM 1.565 14.401 0.109 0.915  
## CountryURT 18.610 15.775 1.180 0.256  
## CountryUGA 1.085 14.401 0.075 0.941  
## CountryKEN 17.398 13.577 1.281 0.220  
## CountryETH 4.730 18.216 0.260 0.799  
##   
## (Dispersion parameter for gaussian family taken to be 165.9079)  
##   
## Null deviance: 3859.7 on 20 degrees of freedom  
## Residual deviance: 2488.6 on 15 degrees of freedom  
## AIC: 173.87  
##   
## Number of Fisher Scoring iterations: 2

##Tv  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -5.0456 -0.4456 0.0000 0.0000 10.3344   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.650 3.794 0.171 0.866  
## CountryZAM 0.030 5.365 0.006 0.996  
## CountryZIM -0.650 4.241 -0.153 0.880  
## CountryURT 0.720 4.646 0.155 0.879  
## CountryUGA -0.650 4.241 -0.153 0.880  
## CountryKEN 4.396 3.999 1.099 0.289  
##   
## (Dispersion parameter for gaussian family taken to be 14.39111)  
##   
## Null deviance: 333.04 on 20 degrees of freedom  
## Residual deviance: 215.87 on 15 degrees of freedom  
## AIC: 122.53  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -5.0456 -0.4456 0.0000 0.0000 10.3344   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.046 1.265 3.990 0.00118 \*\*  
## CountryETH -4.396 3.999 -1.099 0.28900   
## CountryZAM -4.366 3.999 -1.092 0.29218   
## CountryZIM -5.046 2.280 -2.213 0.04279 \*   
## CountryURT -3.676 2.966 -1.239 0.23424   
## CountryUGA -5.046 2.280 -2.213 0.04279 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 14.39111)  
##   
## Null deviance: 333.04 on 20 degrees of freedom  
## Residual deviance: 215.87 on 15 degrees of freedom  
## AIC: 122.53  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -5.0456 -0.4456 0.0000 0.0000 10.3344   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -7.753e-16 1.897e+00 0.000 1.0000   
## CountryKEN 5.046e+00 2.280e+00 2.213 0.0428 \*  
## CountryETH 6.500e-01 4.241e+00 0.153 0.8802   
## CountryZAM 6.800e-01 4.241e+00 0.160 0.8748   
## CountryZIM 1.648e-15 2.682e+00 0.000 1.0000   
## CountryURT 1.370e+00 3.285e+00 0.417 0.6826   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 14.39111)  
##   
## Null deviance: 333.04 on 20 degrees of freedom  
## Residual deviance: 215.87 on 15 degrees of freedom  
## AIC: 122.53  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -5.0456 -0.4456 0.0000 0.0000 10.3344   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.370 2.683 0.511 0.617  
## CountryUGA -1.370 3.285 -0.417 0.683  
## CountryKEN 3.676 2.966 1.239 0.234  
## CountryETH -0.720 4.646 -0.155 0.879  
## CountryZAM -0.690 4.646 -0.149 0.884  
## CountryZIM -1.370 3.285 -0.417 0.683  
##   
## (Dispersion parameter for gaussian family taken to be 14.39111)  
##   
## Null deviance: 333.04 on 20 degrees of freedom  
## Residual deviance: 215.87 on 15 degrees of freedom  
## AIC: 122.53  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -5.0456 -0.4456 0.0000 0.0000 10.3344   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.268e-17 1.897e+00 0.000 1.0000   
## CountryURT 1.370e+00 3.285e+00 0.417 0.6826   
## CountryUGA 4.998e-16 2.682e+00 0.000 1.0000   
## CountryKEN 5.046e+00 2.280e+00 2.213 0.0428 \*  
## CountryETH 6.500e-01 4.241e+00 0.153 0.8802   
## CountryZAM 6.800e-01 4.241e+00 0.160 0.8748   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 14.39111)  
##   
## Null deviance: 333.04 on 20 degrees of freedom  
## Residual deviance: 215.87 on 15 degrees of freedom  
## AIC: 122.53  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -5.0456 -0.4456 0.0000 0.0000 10.3344   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.680 3.794 0.179 0.860  
## CountryZIM -0.680 4.241 -0.160 0.875  
## CountryURT 0.690 4.646 0.149 0.884  
## CountryUGA -0.680 4.241 -0.160 0.875  
## CountryKEN 4.366 3.999 1.092 0.292  
## CountryETH -0.030 5.365 -0.006 0.996  
##   
## (Dispersion parameter for gaussian family taken to be 14.39111)  
##   
## Null deviance: 333.04 on 20 degrees of freedom  
## Residual deviance: 215.87 on 15 degrees of freedom  
## AIC: 122.53  
##   
## Number of Fisher Scoring iterations: 2

##Tsg  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -19.383 -15.533 -1.487 7.013 54.298   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 10.460 21.652 0.483 0.636  
## CountryZAM 24.470 30.620 0.799 0.437  
## CountryZIM 8.922 24.208 0.369 0.718  
## CountryURT 0.690 26.518 0.026 0.980  
## CountryUGA -4.973 24.208 -0.205 0.840  
## CountryKEN 6.859 22.823 0.301 0.768  
##   
## (Dispersion parameter for gaussian family taken to be 468.8051)  
##   
## Null deviance: 7963.6 on 20 degrees of freedom  
## Residual deviance: 7032.1 on 15 degrees of freedom  
## AIC: 195.68  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -19.382 -15.533 -1.487 7.013 54.298   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 17.319 7.217 2.400 0.0298 \*  
## CountryETH -6.859 22.823 -0.301 0.7679   
## CountryZAM 17.611 22.823 0.772 0.4523   
## CountryZIM 2.064 13.011 0.159 0.8761   
## CountryURT -6.169 16.926 -0.364 0.7206   
## CountryUGA -11.831 13.011 -0.909 0.3776   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 468.8051)  
##   
## Null deviance: 7963.6 on 20 degrees of freedom  
## Residual deviance: 7032.1 on 15 degrees of freedom  
## AIC: 195.68  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -19.383 -15.533 -1.488 7.012 54.298   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 5.488 10.826 0.507 0.620  
## CountryKEN 11.831 13.011 0.909 0.378  
## CountryETH 4.972 24.208 0.205 0.840  
## CountryZAM 29.442 24.208 1.216 0.243  
## CountryZIM 13.895 15.310 0.908 0.378  
## CountryURT 5.663 18.751 0.302 0.767  
##   
## (Dispersion parameter for gaussian family taken to be 468.8051)  
##   
## Null deviance: 7963.6 on 20 degrees of freedom  
## Residual deviance: 7032.1 on 15 degrees of freedom  
## AIC: 195.68  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -19.383 -15.533 -1.488 7.012 54.298   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 11.150 15.310 0.728 0.478  
## CountryUGA -5.662 18.751 -0.302 0.767  
## CountryKEN 6.169 16.926 0.364 0.721  
## CountryETH -0.690 26.518 -0.026 0.980  
## CountryZAM 23.780 26.518 0.897 0.384  
## CountryZIM 8.232 18.751 0.439 0.667  
##   
## (Dispersion parameter for gaussian family taken to be 468.8051)  
##   
## Null deviance: 7963.6 on 20 degrees of freedom  
## Residual deviance: 7032.1 on 15 degrees of freedom  
## AIC: 195.68  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -19.382 -15.532 -1.487 7.013 54.298   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 19.382 10.826 1.790 0.0936 .  
## CountryURT -8.232 18.751 -0.439 0.6669   
## CountryUGA -13.895 15.310 -0.908 0.3785   
## CountryKEN -2.064 13.011 -0.159 0.8761   
## CountryETH -8.923 24.208 -0.369 0.7176   
## CountryZAM 15.548 24.208 0.642 0.5304   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 468.8051)  
##   
## Null deviance: 7963.6 on 20 degrees of freedom  
## Residual deviance: 7032.1 on 15 degrees of freedom  
## AIC: 195.68  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -19.382 -15.533 -1.487 7.013 54.298   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 34.93 21.65 1.613 0.128  
## CountryZIM -15.55 24.21 -0.642 0.530  
## CountryURT -23.78 26.52 -0.897 0.384  
## CountryUGA -29.44 24.21 -1.216 0.243  
## CountryKEN -17.61 22.82 -0.772 0.452  
## CountryETH -24.47 30.62 -0.799 0.437  
##   
## (Dispersion parameter for gaussian family taken to be 468.8051)  
##   
## Null deviance: 7963.6 on 20 degrees of freedom  
## Residual deviance: 7032.1 on 15 degrees of freedom  
## AIC: 195.68  
##   
## Number of Fisher Scoring iterations: 2

##TZ  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.9225 -1.0000 -0.5667 0.3400 5.7675   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.0900 2.0394 0.534 0.601  
## CountryZAM -0.4100 2.8842 -0.142 0.889  
## CountryZIM 0.8325 2.2801 0.365 0.720  
## CountryURT -0.7500 2.4978 -0.300 0.768  
## CountryUGA -0.0900 2.2801 -0.039 0.969  
## CountryKEN -0.5233 2.1497 -0.243 0.811  
##   
## (Dispersion parameter for gaussian family taken to be 4.159192)  
##   
## Null deviance: 68.316 on 20 degrees of freedom  
## Residual deviance: 62.388 on 15 degrees of freedom  
## AIC: 96.461  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.9225 -1.0000 -0.5667 0.3400 5.7675   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.5667 0.6798 0.834 0.418  
## CountryETH 0.5233 2.1497 0.243 0.811  
## CountryZAM 0.1133 2.1497 0.053 0.959  
## CountryZIM 1.3558 1.2255 1.106 0.286  
## CountryURT -0.2267 1.5943 -0.142 0.889  
## CountryUGA 0.4333 1.2255 0.354 0.729  
##   
## (Dispersion parameter for gaussian family taken to be 4.159192)  
##   
## Null deviance: 68.316 on 20 degrees of freedom  
## Residual deviance: 62.388 on 15 degrees of freedom  
## AIC: 96.461  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.9225 -1.0000 -0.5667 0.3400 5.7675   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.0000 1.0197 0.981 0.342  
## CountryKEN -0.4333 1.2255 -0.354 0.729  
## CountryETH 0.0900 2.2801 0.039 0.969  
## CountryZAM -0.3200 2.2801 -0.140 0.890  
## CountryZIM 0.9225 1.4421 0.640 0.532  
## CountryURT -0.6600 1.7662 -0.374 0.714  
##   
## (Dispersion parameter for gaussian family taken to be 4.159192)  
##   
## Null deviance: 68.316 on 20 degrees of freedom  
## Residual deviance: 62.388 on 15 degrees of freedom  
## AIC: 96.461  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.9225 -1.0000 -0.5667 0.3400 5.7675   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.3400 1.4421 0.236 0.817  
## CountryUGA 0.6600 1.7662 0.374 0.714  
## CountryKEN 0.2267 1.5943 0.142 0.889  
## CountryETH 0.7500 2.4978 0.300 0.768  
## CountryZAM 0.3400 2.4978 0.136 0.894  
## CountryZIM 1.5825 1.7662 0.896 0.384  
##   
## (Dispersion parameter for gaussian family taken to be 4.159192)  
##   
## Null deviance: 68.316 on 20 degrees of freedom  
## Residual deviance: 62.388 on 15 degrees of freedom  
## AIC: 96.461  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.9225 -1.0000 -0.5667 0.3400 5.7675   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.9225 1.0197 1.885 0.0789 .  
## CountryURT -1.5825 1.7662 -0.896 0.3844   
## CountryUGA -0.9225 1.4421 -0.640 0.5320   
## CountryKEN -1.3558 1.2255 -1.106 0.2860   
## CountryETH -0.8325 2.2801 -0.365 0.7201   
## CountryZAM -1.2425 2.2801 -0.545 0.5938   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 4.159192)  
##   
## Null deviance: 68.316 on 20 degrees of freedom  
## Residual deviance: 62.388 on 15 degrees of freedom  
## AIC: 96.461  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.9225 -1.0000 -0.5667 0.3400 5.7675   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.6800 2.0394 0.333 0.743  
## CountryZIM 1.2425 2.2801 0.545 0.594  
## CountryURT -0.3400 2.4978 -0.136 0.894  
## CountryUGA 0.3200 2.2801 0.140 0.890  
## CountryKEN -0.1133 2.1497 -0.053 0.959  
## CountryETH 0.4100 2.8842 0.142 0.889  
##   
## (Dispersion parameter for gaussian family taken to be 4.159192)  
##   
## Null deviance: 68.316 on 20 degrees of freedom  
## Residual deviance: 62.388 on 15 degrees of freedom  
## AIC: 96.461  
##   
## Number of Fisher Scoring iterations: 2

##TcTv  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.291 -1.041 0.000 0.000 7.709   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 7.336e-15 2.616e+00 0.000 1.000  
## CountryZAM -3.870e-15 3.700e+00 0.000 1.000  
## CountryZIM -7.218e-15 2.925e+00 0.000 1.000  
## CountryURT -8.330e-15 3.204e+00 0.000 1.000  
## CountryUGA -6.831e-15 2.925e+00 0.000 1.000  
## CountryKEN 2.291e+00 2.758e+00 0.831 0.419  
##   
## (Dispersion parameter for gaussian family taken to be 6.843899)  
##   
## Null deviance: 129.65 on 20 degrees of freedom  
## Residual deviance: 102.66 on 15 degrees of freedom  
## AIC: 106.92  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.291 -1.041 0.000 0.000 7.709   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.291 0.872 2.627 0.019 \*  
## CountryETH -2.291 2.758 -0.831 0.419   
## CountryZAM -2.291 2.758 -0.831 0.419   
## CountryZIM -2.291 1.572 -1.457 0.166   
## CountryURT -2.291 2.045 -1.120 0.280   
## CountryUGA -2.291 1.572 -1.457 0.166   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 6.843899)  
##   
## Null deviance: 129.65 on 20 degrees of freedom  
## Residual deviance: 102.66 on 15 degrees of freedom  
## AIC: 106.92  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.291 -1.041 0.000 0.000 7.709   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -5.814e-16 1.308e+00 0.000 1.000  
## CountryKEN 2.291e+00 1.572e+00 1.457 0.166  
## CountryETH 2.561e-15 2.925e+00 0.000 1.000  
## CountryZAM 9.177e-16 2.925e+00 0.000 1.000  
## CountryZIM 9.428e-16 1.850e+00 0.000 1.000  
## CountryURT 1.538e-15 2.266e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 6.843899)  
##   
## Null deviance: 129.65 on 20 degrees of freedom  
## Residual deviance: 102.66 on 15 degrees of freedom  
## AIC: 106.92  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.291 -1.041 0.000 0.000 7.709   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -4.816e-16 1.850e+00 0.00 1.00  
## CountryUGA 4.936e-16 2.266e+00 0.00 1.00  
## CountryKEN 2.291e+00 2.045e+00 1.12 0.28  
## CountryETH -1.637e-15 3.204e+00 0.00 1.00  
## CountryZAM -6.595e-16 3.204e+00 0.00 1.00  
## CountryZIM 0.000e+00 2.266e+00 0.00 1.00  
##   
## (Dispersion parameter for gaussian family taken to be 6.843899)  
##   
## Null deviance: 129.65 on 20 degrees of freedom  
## Residual deviance: 102.66 on 15 degrees of freedom  
## AIC: 106.92  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.291 -1.041 0.000 0.000 7.709   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.209e-16 1.308e+00 0.000 1.000  
## CountryURT 4.839e-15 2.266e+00 0.000 1.000  
## CountryUGA 2.499e-16 1.850e+00 0.000 1.000  
## CountryKEN 2.291e+00 1.572e+00 1.457 0.166  
## CountryETH 1.271e-15 2.925e+00 0.000 1.000  
## CountryZAM 1.490e-15 2.925e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 6.843899)  
##   
## Null deviance: 129.65 on 20 degrees of freedom  
## Residual deviance: 102.66 on 15 degrees of freedom  
## AIC: 106.92  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.291 -1.041 0.000 0.000 7.709   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -6.789e-16 2.616e+00 0.000 1.000  
## CountryZIM 6.909e-16 2.925e+00 0.000 1.000  
## CountryURT 6.397e-16 3.204e+00 0.000 1.000  
## CountryUGA 5.186e-16 2.925e+00 0.000 1.000  
## CountryKEN 2.291e+00 2.758e+00 0.831 0.419  
## CountryETH 1.256e-15 3.700e+00 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 6.843899)  
##   
## Null deviance: 129.65 on 20 degrees of freedom  
## Residual deviance: 102.66 on 15 degrees of freedom  
## AIC: 106.92  
##   
## Number of Fisher Scoring iterations: 2

##TcTZ  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.2278 0.0000 0.0000 1.3122   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.041e-15 4.589e-01 0.000 1.000  
## CountryZAM -1.807e-15 6.490e-01 0.000 1.000  
## CountryZIM -1.071e-15 5.131e-01 0.000 1.000  
## CountryURT 7.050e-01 5.620e-01 1.254 0.229  
## CountryUGA -1.084e-15 5.131e-01 0.000 1.000  
## CountryKEN 2.278e-01 4.837e-01 0.471 0.644  
##   
## (Dispersion parameter for gaussian family taken to be 0.210587)  
##   
## Null deviance: 4.0497 on 20 degrees of freedom  
## Residual deviance: 3.1588 on 15 degrees of freedom  
## AIC: 33.815  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.2278 0.0000 0.0000 1.3122   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.2278 0.1530 1.489 0.157  
## CountryETH -0.2278 0.4837 -0.471 0.644  
## CountryZAM -0.2278 0.4837 -0.471 0.644  
## CountryZIM -0.2278 0.2758 -0.826 0.422  
## CountryURT 0.4772 0.3587 1.330 0.203  
## CountryUGA -0.2278 0.2758 -0.826 0.422  
##   
## (Dispersion parameter for gaussian family taken to be 0.210587)  
##   
## Null deviance: 4.0497 on 20 degrees of freedom  
## Residual deviance: 3.1588 on 15 degrees of freedom  
## AIC: 33.815  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.2278 0.0000 0.0000 1.3122   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -7.268e-17 2.294e-01 0.000 1.0000   
## CountryKEN 2.278e-01 2.758e-01 0.826 0.4218   
## CountryETH 4.068e-17 5.131e-01 0.000 1.0000   
## CountryZAM -1.478e-17 5.131e-01 0.000 1.0000   
## CountryZIM 3.583e-17 3.245e-01 0.000 1.0000   
## CountryURT 7.050e-01 3.974e-01 1.774 0.0964 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.210587)  
##   
## Null deviance: 4.0497 on 20 degrees of freedom  
## Residual deviance: 3.1588 on 15 degrees of freedom  
## AIC: 33.815  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.2278 0.0000 0.0000 1.3122   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.7050 0.3245 2.173 0.0462 \*  
## CountryUGA -0.7050 0.3974 -1.774 0.0964 .  
## CountryKEN -0.4772 0.3587 -1.330 0.2033   
## CountryETH -0.7050 0.5620 -1.254 0.2289   
## CountryZAM -0.7050 0.5620 -1.254 0.2289   
## CountryZIM -0.7050 0.3974 -1.774 0.0964 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.210587)  
##   
## Null deviance: 4.0497 on 20 degrees of freedom  
## Residual deviance: 3.1588 on 15 degrees of freedom  
## AIC: 33.815  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.2278 0.0000 0.0000 1.3122   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -1.938e-16 2.294e-01 0.000 1.0000   
## CountryURT 7.050e-01 3.974e-01 1.774 0.0964 .  
## CountryUGA 3.280e-16 3.245e-01 0.000 1.0000   
## CountryKEN 2.278e-01 2.758e-01 0.826 0.4218   
## CountryETH 5.113e-16 5.131e-01 0.000 1.0000   
## CountryZAM 1.241e-16 5.131e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.210587)  
##   
## Null deviance: 4.0497 on 20 degrees of freedom  
## Residual deviance: 3.1588 on 15 degrees of freedom  
## AIC: 33.815  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.2278 0.0000 0.0000 1.3122   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -2.346e-17 4.589e-01 0.000 1.000  
## CountryZIM -3.856e-16 5.131e-01 0.000 1.000  
## CountryURT 7.050e-01 5.620e-01 1.254 0.229  
## CountryUGA 3.241e-17 5.131e-01 0.000 1.000  
## CountryKEN 2.278e-01 4.837e-01 0.471 0.644  
## CountryETH 0.000e+00 6.490e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.210587)  
##   
## Null deviance: 4.0497 on 20 degrees of freedom  
## Residual deviance: 3.1588 on 15 degrees of freedom  
## AIC: 33.815  
##   
## Number of Fisher Scoring iterations: 2

##TvTZ  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.1144 0.0000 0.0000 0.9156   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.463e-15 3.594e-01 0.000 1.000  
## CountryZAM -1.402e-16 5.082e-01 0.000 1.000  
## CountryZIM -1.412e-15 4.018e-01 0.000 1.000  
## CountryURT 7.050e-01 4.401e-01 1.602 0.130  
## CountryUGA -1.396e-15 4.018e-01 0.000 1.000  
## CountryKEN 1.144e-01 3.788e-01 0.302 0.767  
##   
## (Dispersion parameter for gaussian family taken to be 0.1291381)  
##   
## Null deviance: 2.7655 on 20 degrees of freedom  
## Residual deviance: 1.9371 on 15 degrees of freedom  
## AIC: 23.545  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.1144 0.0000 0.0000 0.9156   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.1144 0.1198 0.955 0.3545   
## CountryETH -0.1144 0.3788 -0.302 0.7667   
## CountryZAM -0.1144 0.3788 -0.302 0.7667   
## CountryZIM -0.1144 0.2159 -0.530 0.6039   
## CountryURT 0.5906 0.2809 2.102 0.0528 .  
## CountryUGA -0.1144 0.2159 -0.530 0.6039   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.1291381)  
##   
## Null deviance: 2.7655 on 20 degrees of freedom  
## Residual deviance: 1.9371 on 15 degrees of freedom  
## AIC: 23.545  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.1144 0.0000 0.0000 0.9156   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.696e-16 1.797e-01 0.000 1.0000   
## CountryKEN 1.144e-01 2.159e-01 0.530 0.6039   
## CountryETH 4.315e-16 4.018e-01 0.000 1.0000   
## CountryZAM 2.822e-17 4.018e-01 0.000 1.0000   
## CountryZIM 1.433e-16 2.541e-01 0.000 1.0000   
## CountryURT 7.050e-01 3.112e-01 2.265 0.0387 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.1291381)  
##   
## Null deviance: 2.7655 on 20 degrees of freedom  
## Residual deviance: 1.9371 on 15 degrees of freedom  
## AIC: 23.545  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.1144 0.0000 0.0000 0.9156   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.7050 0.2541 2.774 0.0142 \*  
## CountryUGA -0.7050 0.3112 -2.265 0.0387 \*  
## CountryKEN -0.5906 0.2809 -2.102 0.0528 .  
## CountryETH -0.7050 0.4401 -1.602 0.1300   
## CountryZAM -0.7050 0.4401 -1.602 0.1300   
## CountryZIM -0.7050 0.3112 -2.265 0.0387 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.1291381)  
##   
## Null deviance: 2.7655 on 20 degrees of freedom  
## Residual deviance: 1.9371 on 15 degrees of freedom  
## AIC: 23.545  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.1144 0.0000 0.0000 0.9156   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -7.268e-17 1.797e-01 0.000 1.0000   
## CountryURT 7.050e-01 3.112e-01 2.265 0.0387 \*  
## CountryUGA 1.249e-16 2.541e-01 0.000 1.0000   
## CountryKEN 1.144e-01 2.159e-01 0.530 0.6039   
## CountryETH 3.537e-16 4.018e-01 0.000 1.0000   
## CountryZAM 2.482e-16 4.018e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.1291381)  
##   
## Null deviance: 2.7655 on 20 degrees of freedom  
## Residual deviance: 1.9371 on 15 degrees of freedom  
## AIC: 23.545  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.7050 -0.1144 0.0000 0.0000 0.9156   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.205e-16 3.594e-01 0.000 1.000  
## CountryZIM 6.324e-16 4.018e-01 0.000 1.000  
## CountryURT 7.050e-01 4.401e-01 1.602 0.130  
## CountryUGA 4.862e-17 4.018e-01 0.000 1.000  
## CountryKEN 1.144e-01 3.788e-01 0.302 0.767  
## CountryETH 4.710e-16 5.082e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.1291381)  
##   
## Null deviance: 2.7655 on 20 degrees of freedom  
## Residual deviance: 1.9371 on 15 degrees of freedom  
## AIC: 23.545  
##   
## Number of Fisher Scoring iterations: 2

##TcTsg  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.225 -5.341 0.000 2.982 10.225   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.650 6.511 0.100 0.922  
## CountryZAM 6.880 9.207 0.747 0.466  
## CountryZIM 1.627 7.279 0.224 0.826  
## CountryURT 10.255 7.974 1.286 0.218  
## CountryUGA -0.650 7.279 -0.089 0.930  
## CountryKEN 5.201 6.863 0.758 0.460  
##   
## (Dispersion parameter for gaussian family taken to be 42.38917)  
##   
## Null deviance: 858.72 on 20 degrees of freedom  
## Residual deviance: 635.84 on 15 degrees of freedom  
## AIC: 145.21  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.225 -5.341 0.000 2.982 10.225   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.851 2.170 2.696 0.0166 \*  
## CountryETH -5.201 6.863 -0.758 0.4603   
## CountryZAM 1.679 6.863 0.245 0.8101   
## CountryZIM -3.574 3.912 -0.913 0.3755   
## CountryURT 5.054 5.090 0.993 0.3365   
## CountryUGA -5.851 3.912 -1.496 0.1555   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 42.38917)  
##   
## Null deviance: 858.72 on 20 degrees of freedom  
## Residual deviance: 635.84 on 15 degrees of freedom  
## AIC: 145.21  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.225 -5.341 0.000 2.982 10.225   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.427e-15 3.255e+00 0.000 1.0000   
## CountryKEN 5.851e+00 3.912e+00 1.496 0.1555   
## CountryETH 6.500e-01 7.279e+00 0.089 0.9300   
## CountryZAM 7.530e+00 7.279e+00 1.034 0.3173   
## CountryZIM 2.277e+00 4.604e+00 0.495 0.6280   
## CountryURT 1.090e+01 5.638e+00 1.934 0.0722 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 42.38917)  
##   
## Null deviance: 858.72 on 20 degrees of freedom  
## Residual deviance: 635.84 on 15 degrees of freedom  
## AIC: 145.21  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.225 -5.341 0.000 2.982 10.225   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 10.905 4.604 2.369 0.0317 \*  
## CountryUGA -10.905 5.638 -1.934 0.0722 .  
## CountryKEN -5.054 5.090 -0.993 0.3365   
## CountryETH -10.255 7.974 -1.286 0.2179   
## CountryZAM -3.375 7.974 -0.423 0.6781   
## CountryZIM -8.627 5.638 -1.530 0.1468   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 42.38917)  
##   
## Null deviance: 858.72 on 20 degrees of freedom  
## Residual deviance: 635.84 on 15 degrees of freedom  
## AIC: 145.21  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.225 -5.341 0.000 2.982 10.225   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 2.277 3.255 0.700 0.495  
## CountryURT 8.627 5.638 1.530 0.147  
## CountryUGA -2.277 4.604 -0.495 0.628  
## CountryKEN 3.574 3.912 0.913 0.375  
## CountryETH -1.627 7.279 -0.224 0.826  
## CountryZAM 5.253 7.279 0.722 0.482  
##   
## (Dispersion parameter for gaussian family taken to be 42.38917)  
##   
## Null deviance: 858.72 on 20 degrees of freedom  
## Residual deviance: 635.84 on 15 degrees of freedom  
## AIC: 145.21  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.225 -5.341 0.000 2.982 10.225   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 7.530 6.511 1.157 0.266  
## CountryZIM -5.253 7.279 -0.722 0.482  
## CountryURT 3.375 7.974 0.423 0.678  
## CountryUGA -7.530 7.279 -1.034 0.317  
## CountryKEN -1.679 6.863 -0.245 0.810  
## CountryETH -6.880 9.208 -0.747 0.466  
##   
## (Dispersion parameter for gaussian family taken to be 42.38917)  
##   
## Null deviance: 858.72 on 20 degrees of freedom  
## Residual deviance: 635.84 on 15 degrees of freedom  
## AIC: 145.21  
##   
## Number of Fisher Scoring iterations: 2

##TvTsg  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3400 -0.1389 0.0000 0.0000 1.1111   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.4400 0.3286 1.339 0.201  
## CountryZAM -0.4400 0.4648 -0.947 0.359  
## CountryZIM -0.4400 0.3674 -1.197 0.250  
## CountryURT -0.1000 0.4025 -0.248 0.807  
## CountryUGA -0.4400 0.3674 -1.197 0.250  
## CountryKEN -0.3011 0.3464 -0.869 0.398  
##   
## (Dispersion parameter for gaussian family taken to be 0.1080059)  
##   
## Null deviance: 1.9510 on 20 degrees of freedom  
## Residual deviance: 1.6201 on 15 degrees of freedom  
## AIC: 19.793  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3400 -0.1389 0.0000 0.0000 1.1111   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.1389 0.1095 1.268 0.224  
## CountryETH 0.3011 0.3464 0.869 0.398  
## CountryZAM -0.1389 0.3464 -0.401 0.694  
## CountryZIM -0.1389 0.1975 -0.703 0.493  
## CountryURT 0.2011 0.2569 0.783 0.446  
## CountryUGA -0.1389 0.1975 -0.703 0.493  
##   
## (Dispersion parameter for gaussian family taken to be 0.1080059)  
##   
## Null deviance: 1.9510 on 20 degrees of freedom  
## Residual deviance: 1.6201 on 15 degrees of freedom  
## AIC: 19.793  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3400 -0.1389 0.0000 0.0000 1.1111   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.057e-17 1.643e-01 0.000 1.000  
## CountryKEN 1.389e-01 1.975e-01 0.703 0.493  
## CountryETH 4.400e-01 3.674e-01 1.197 0.250  
## CountryZAM -1.527e-16 3.674e-01 0.000 1.000  
## CountryZIM -1.792e-17 2.324e-01 0.000 1.000  
## CountryURT 3.400e-01 2.846e-01 1.195 0.251  
##   
## (Dispersion parameter for gaussian family taken to be 0.1080059)  
##   
## Null deviance: 1.9510 on 20 degrees of freedom  
## Residual deviance: 1.6201 on 15 degrees of freedom  
## AIC: 19.793  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3400 -0.1389 0.0000 0.0000 1.1111   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.3400 0.2324 1.463 0.164  
## CountryUGA -0.3400 0.2846 -1.195 0.251  
## CountryKEN -0.2011 0.2569 -0.783 0.446  
## CountryETH 0.1000 0.4025 0.248 0.807  
## CountryZAM -0.3400 0.4025 -0.845 0.412  
## CountryZIM -0.3400 0.2846 -1.195 0.251  
##   
## (Dispersion parameter for gaussian family taken to be 0.1080059)  
##   
## Null deviance: 1.9510 on 20 degrees of freedom  
## Residual deviance: 1.6201 on 15 degrees of freedom  
## AIC: 19.793  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3400 -0.1389 0.0000 0.0000 1.1111   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 5.451e-17 1.643e-01 0.000 1.000  
## CountryURT 3.400e-01 2.846e-01 1.195 0.251  
## CountryUGA 1.562e-17 2.324e-01 0.000 1.000  
## CountryKEN 1.389e-01 1.975e-01 0.703 0.493  
## CountryETH 4.400e-01 3.674e-01 1.197 0.250  
## CountryZAM -1.241e-16 3.674e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.1080059)  
##   
## Null deviance: 1.9510 on 20 degrees of freedom  
## Residual deviance: 1.6201 on 15 degrees of freedom  
## AIC: 19.793  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3400 -0.1389 0.0000 0.0000 1.1111   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 9.176e-18 3.286e-01 0.000 1.000  
## CountryZIM 1.542e-17 3.674e-01 0.000 1.000  
## CountryURT 3.400e-01 4.025e-01 0.845 0.412  
## CountryUGA 3.241e-17 3.674e-01 0.000 1.000  
## CountryKEN 1.389e-01 3.464e-01 0.401 0.694  
## CountryETH 4.400e-01 4.648e-01 0.947 0.359  
##   
## (Dispersion parameter for gaussian family taken to be 0.1080059)  
##   
## Null deviance: 1.9510 on 20 degrees of freedom  
## Residual deviance: 1.6201 on 15 degrees of freedom  
## AIC: 19.793  
##   
## Number of Fisher Scoring iterations: 2

##TzTsg  
data\_gp$Country <- relevel(data\_gp$Country, ref= "ETH")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3667 -0.3667 0.0000 0.0000 1.9033   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.6500 0.5927 1.097 0.290  
## CountryZAM -0.6500 0.8383 -0.775 0.450  
## CountryZIM -0.6500 0.6627 -0.981 0.342  
## CountryURT 0.3950 0.7260 0.544 0.594  
## CountryUGA -0.6500 0.6627 -0.981 0.342  
## CountryKEN -0.2833 0.6248 -0.453 0.657  
##   
## (Dispersion parameter for gaussian family taken to be 0.35135)  
##   
## Null deviance: 7.3496 on 20 degrees of freedom  
## Residual deviance: 5.2702 on 15 degrees of freedom  
## AIC: 44.564  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "KEN")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3667 -0.3667 0.0000 0.0000 1.9033   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.3667 0.1976 1.856 0.0832 .  
## CountryETH 0.2833 0.6248 0.453 0.6567   
## CountryZAM -0.3667 0.6248 -0.587 0.5660   
## CountryZIM -0.3667 0.3562 -1.029 0.3196   
## CountryURT 0.6783 0.4634 1.464 0.1639   
## CountryUGA -0.3667 0.3562 -1.029 0.3196   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.35135)  
##   
## Null deviance: 7.3496 on 20 degrees of freedom  
## Residual deviance: 5.2702 on 15 degrees of freedom  
## AIC: 44.564  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "UGA")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3667 -0.3667 0.0000 0.0000 1.9033   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.423e-17 2.964e-01 0.000 1.0000   
## CountryKEN 3.667e-01 3.562e-01 1.029 0.3196   
## CountryETH 6.500e-01 6.627e-01 0.981 0.3422   
## CountryZAM -1.751e-16 6.627e-01 0.000 1.0000   
## CountryZIM 7.166e-17 4.191e-01 0.000 1.0000   
## CountryURT 1.045e+00 5.133e-01 2.036 0.0598 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.35135)  
##   
## Null deviance: 7.3496 on 20 degrees of freedom  
## Residual deviance: 5.2702 on 15 degrees of freedom  
## AIC: 44.564  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "URT")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3667 -0.3667 0.0000 0.0000 1.9033   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.0450 0.4191 2.493 0.0248 \*  
## CountryUGA -1.0450 0.5133 -2.036 0.0598 .  
## CountryKEN -0.6783 0.4634 -1.464 0.1639   
## CountryETH -0.3950 0.7260 -0.544 0.5944   
## CountryZAM -1.0450 0.7260 -1.439 0.1706   
## CountryZIM -1.0450 0.5133 -2.036 0.0598 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.35135)  
##   
## Null deviance: 7.3496 on 20 degrees of freedom  
## Residual deviance: 5.2703 on 15 degrees of freedom  
## AIC: 44.564  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZIM")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3667 -0.3667 0.0000 0.0000 1.9033   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -2.059e-16 2.964e-01 0.000 1.0000   
## CountryURT 1.045e+00 5.133e-01 2.036 0.0598 .  
## CountryUGA 5.935e-16 4.191e-01 0.000 1.0000   
## CountryKEN 3.667e-01 3.562e-01 1.029 0.3196   
## CountryETH 6.500e-01 6.627e-01 0.981 0.3422   
## CountryZAM -1.241e-16 6.627e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.35135)  
##   
## Null deviance: 7.3496 on 20 degrees of freedom  
## Residual deviance: 5.2702 on 15 degrees of freedom  
## AIC: 44.564  
##   
## Number of Fisher Scoring iterations: 2

data\_gp$Country <- relevel(data\_gp$Country, ref= "ZAM")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gp, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3667 -0.3667 0.0000 0.0000 1.9033   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -3.616e-16 5.927e-01 0.000 1.000  
## CountryZIM 3.085e-16 6.627e-01 0.000 1.000  
## CountryURT 1.045e+00 7.260e-01 1.439 0.171  
## CountryUGA 3.241e-16 6.627e-01 0.000 1.000  
## CountryKEN 3.667e-01 6.248e-01 0.587 0.566  
## CountryETH 6.500e-01 8.383e-01 0.775 0.450  
##   
## (Dispersion parameter for gaussian family taken to be 0.35135)  
##   
## Null deviance: 7.3496 on 20 degrees of freedom  
## Residual deviance: 5.2702 on 15 degrees of freedom  
## AIC: 44.564  
##   
## Number of Fisher Scoring iterations: 2

#---------------------------------------------------------------------  
###For Gpg  
data\_gpg <- subset(data, Species=="Gpg")  
data\_gpg

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc  
## 4 SEN Pout Gpg NI 4 0.00 7.04 1.51  
## 12 BKF Folonzo Gpg F 12 0.00 7.55 0.94  
## 13 BKF Folonzo Gpg M 13 1.89 16.04 0.00  
## 15 GUI Kangoliya Gpg F 15 95.74 0.00 0.00  
## 18 SEN Kayar Gpg NI 18 0.00 1.14 0.00  
## 25 BKF Moussodougou Gpg F 25 0.00 44.87 0.00  
## 30 BKF Comoe Gpg F 30 0.00 2.82 1.41  
## 32 BKF Kartasso Gpg F 32 0.00 0.00 0.00  
## 33 BKF Kartasso Gpg M 33 0.00 0.00 0.00  
## 34 SEN DiackSAFo Peulh Gpg NI 34 0.00 7.69 0.00  
## 35 BKF Moussodougou Gpg M 35 0.00 21.88 0.00  
## 40 MLI Bani Gpg F 40 0.00 1.72 0.00  
## 45 BKF Kampty Gpg F 45 0.00 90.57 1.89  
## 47 BKF Comoe Gpg M 47 0.00 1.92 1.92  
## 48 MLI SEN Gpg M 48 0.00 7.69 1.92  
## 54 BKF Bama Gpg F 54 0.00 0.00 0.00  
## 56 SEN Tambacounda Gpg F 56 0.00 41.46 0.00  
## 57 SEN Tambacounda Gpg M 57 0.00 71.79 0.00  
## 58 SEN SebikoURTe Gpg NI 58 0.00 5.13 0.00  
## 62 MLI SEN Gpg F 62 0.00 0.00 0.00  
## 64 BKF Bama Gpg M 64 0.00 0.00 0.00  
## 65 MLI Banco Gpg F 65 0.00 20.59 0.00  
## 66 BKF Dedougou Gpg F 66 0.00 52.94 0.00  
## 67 MLI Sikasso Gpg F 67 0.00 6.06 0.00  
## 71 GUI Kangoliya Gpg M 71 0.00 0.00 0.00  
## 77 GUI Mini Gpg F 77 0.00 3.45 0.00  
## 78 SEN Hann Gpg NI 78 0.00 0.00 0.00  
## 80 BKF Kampty Gpg M 80 0.00 80.77 0.00  
## 82 GUI Kifala Gpg M 82 0.00 0.00 0.00  
## 83 MLI Sikasso Gpg M 83 0.00 0.00 0.00  
## 84 MLI SS Gpg F 84 0.00 4.00 0.00  
## 86 BKF Kenedougou Gpg F 86 0.00 0.00 0.00  
## 87 MLI SS Gpg M 87 0.00 0.00 0.00  
## 88 BKF Dedougou Gpg M 88 0.00 69.57 4.35  
## 89 GUI Bafing Gpg F 89 0.00 5.00 0.00  
## 91 BKF Kampty Gpg NI 91 0.00 84.21 0.00  
## 92 GUI Tinkisso Gpg M 92 0.00 5.56 0.00  
## 94 BKF Kenedougou Gpg M 94 0.00 0.00 0.00  
## 96 GUI Dekonkore Gpg F 96 0.00 6.25 0.00  
## 97 GUI Mini Gpg M 97 0.00 0.00 0.00  
## 98 SEN Fleuve Gambie Gpg M 98 0.00 43.75 0.00  
## 102 GUI Bafing Gpg M 102 0.00 0.00 0.00  
## 103 GUI Tinkisso Gpg F 103 0.00 7.69 0.00  
## 104 BKF Bouroum bouroum Gpg F 104 0.00 92.31 0.00  
## 106 GUI Karifale Gpg M 106 0.00 8.33 0.00  
## 107 GUI Lemonako Gpg F 107 0.00 0.00 0.00  
## 108 BKF KouriGUIon Gpg F 108 0.00 50.00 0.00  
## 109 MLI Bani Gpg M 109 0.00 0.00 0.00  
## 110 MLI Sybi Gpg F 110 0.00 0.00 0.00  
## 111 MLI Sybi Gpg M 111 0.00 0.00 0.00  
## 113 SEN Fleueve G Gpg F 113 0.00 11.11 0.00  
## 114 BKF KouriGUIon Gpg NI 114 0.00 22.22 0.00  
## 117 GUI Lemonako Gpg M 117 0.00 0.00 0.00  
## 119 SEN Diaguiri Gpg F 119 0.00 0.00 0.00  
## 120 MLI Banco Gpg M 120 0.00 28.57 0.00  
## 121 MLI Baoule Gpg F 121 0.00 42.86 0.00  
## 122 MLI Baoule Gpg M 122 0.00 42.86 0.00  
## 123 MLI Bougouni Gpg M 123 0.00 0.00 0.00  
## 124 BKF Lorepeni Gpg F 124 0.00 71.43 0.00  
## 127 SEN MousSAFlla Gpg M 127 0.00 0.00 0.00  
## 128 MLI Baguineda Gpg F 128 0.00 16.67 0.00  
## 129 MLI Bougouni Gpg F 129 0.00 0.00 0.00  
## 130 MLI Kita Gpg M 130 0.00 16.67 0.00  
## 136 GUI Kifala Gpg F 136 0.00 0.00 0.00  
## 137 BKF Bouroum bouroum Gpg M 137 0.00 80.00 0.00  
## 138 SEN Fleuve Gambie Gpg F 138 0.00 25.00 0.00  
## 143 SEN Niokolo Gpg M 143 0.00 0.00 0.00  
## 145 BKF Lorepeni Gpg M 145 0.00 100.00 0.00  
## 146 BKF KouriGUIon Gpg M 146 0.00 66.67 0.00  
## 147 BKF Ouarkoye Gpg M 147 0.00 100.00 0.00  
## 150 SEN Diaguiri Gpg M 150 0.00 50.00 0.00  
## 151 BKF Ouarkoye Gpg F 151 0.00 100.00 50.00  
## 156 GUI Karifale Gpg F 156 0.00 0.00 0.00  
## 157 SEN Mako Gpg M 157 0.00 100.00 0.00  
## Prev\_Tv Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz  
## 4 2.01 0.50 3.02 0 0.00 0.00 0.00  
## 12 2.83 1.89 0.00 0 0.00 0.00 1.89  
## 13 5.66 5.66 0.00 0 1.89 0.00 2.83  
## 15 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 18 0.00 0.00 1.14 0 0.00 0.00 0.00  
## 25 20.51 12.82 0.00 0 0.00 0.00 11.54  
## 30 1.41 0.00 0.00 0 0.00 0.00 0.00  
## 32 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 33 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 34 1.54 1.54 4.62 0 0.00 0.00 0.00  
## 35 6.25 15.63 0.00 0 0.00 0.00 0.00  
## 40 1.72 0.00 0.00 0 0.00 0.00 0.00  
## 45 62.26 1.89 11.32 0 0.00 0.00 0.00  
## 47 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 48 1.92 3.85 0.00 0 0.00 0.00 0.00  
## 54 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 56 26.83 7.32 0.00 0 0.00 0.00 7.32  
## 57 53.85 2.56 0.00 0 0.00 0.00 15.38  
## 58 5.13 0.00 0.00 0 0.00 0.00 0.00  
## 62 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 64 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 65 20.59 0.00 0.00 0 0.00 0.00 0.00  
## 66 26.47 0.00 23.53 0 0.00 0.00 0.00  
## 67 0.00 6.06 0.00 0 0.00 0.00 0.00  
## 71 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 77 3.45 0.00 0.00 0 0.00 0.00 0.00  
## 78 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 80 65.38 0.00 7.69 0 0.00 0.00 0.00  
## 82 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 83 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 84 4.00 0.00 0.00 0 0.00 0.00 0.00  
## 86 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 87 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 88 30.43 13.04 4.35 0 0.00 4.35 0.00  
## 89 5.00 0.00 0.00 0 0.00 0.00 0.00  
## 91 26.32 5.26 21.05 0 0.00 0.00 0.00  
## 92 5.56 0.00 0.00 0 0.00 0.00 0.00  
## 94 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 96 6.25 0.00 0.00 0 0.00 0.00 0.00  
## 97 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 98 43.75 0.00 0.00 0 0.00 0.00 0.00  
## 102 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 103 7.69 0.00 0.00 0 0.00 0.00 0.00  
## 104 53.85 0.00 23.08 0 0.00 0.00 0.00  
## 106 8.33 0.00 0.00 0 0.00 0.00 0.00  
## 107 8.33 0.00 0.00 0 0.00 0.00 0.00  
## 108 0.00 0.00 33.33 0 0.00 0.00 0.00  
## 109 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 110 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 111 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 113 11.11 0.00 0.00 0 0.00 0.00 0.00  
## 114 0.00 0.00 11.11 0 0.00 0.00 0.00  
## 117 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 119 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 120 28.57 0.00 0.00 0 0.00 0.00 0.00  
## 121 42.86 0.00 0.00 0 0.00 0.00 0.00  
## 122 42.86 0.00 0.00 0 0.00 0.00 0.00  
## 123 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 124 14.29 0.00 28.57 0 0.00 0.00 0.00  
## 127 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 128 16.67 0.00 0.00 0 0.00 0.00 0.00  
## 129 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 130 16.67 0.00 0.00 0 0.00 0.00 0.00  
## 136 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 137 40.00 0.00 20.00 0 0.00 0.00 0.00  
## 138 25.00 0.00 0.00 0 0.00 0.00 0.00  
## 143 66.67 0.00 0.00 0 0.00 0.00 0.00  
## 145 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 146 33.33 0.00 0.00 0 0.00 0.00 0.00  
## 147 33.33 0.00 0.00 0 0.00 0.00 0.00  
## 150 0.00 50.00 0.00 0 0.00 0.00 0.00  
## 151 50.00 0.00 0.00 0 0.00 0.00 0.00  
## 156 0.00 0.00 0.00 0 0.00 0.00 0.00  
## 157 100.00 0.00 0.00 0 0.00 0.00 0.00  
## Prev\_TvTsg Prev\_TzTsg Prev\_TcTvTz  
## 4 0.00 0.00 0  
## 12 0.00 0.00 0  
## 13 0.00 0.00 0  
## 15 0.00 0.00 0  
## 18 0.00 0.00 0  
## 25 0.00 0.00 0  
## 30 0.00 0.00 0  
## 32 0.00 0.00 0  
## 33 0.00 0.00 0  
## 34 0.00 0.00 0  
## 35 0.00 0.00 0  
## 40 0.00 0.00 0  
## 45 9.43 3.77 0  
## 47 0.00 0.00 0  
## 48 0.00 0.00 0  
## 54 0.00 0.00 0  
## 56 0.00 0.00 0  
## 57 0.00 0.00 0  
## 58 0.00 0.00 0  
## 62 0.00 0.00 0  
## 64 0.00 0.00 0  
## 65 0.00 0.00 0  
## 66 2.94 0.00 0  
## 67 0.00 0.00 0  
## 71 0.00 0.00 0  
## 77 0.00 0.00 0  
## 78 0.00 0.00 0  
## 80 7.69 0.00 0  
## 82 0.00 0.00 0  
## 83 0.00 0.00 0  
## 84 0.00 0.00 0  
## 86 0.00 0.00 0  
## 87 0.00 0.00 0  
## 88 4.35 8.70 0  
## 89 0.00 0.00 0  
## 91 31.58 0.00 0  
## 92 0.00 0.00 0  
## 94 0.00 0.00 0  
## 96 0.00 0.00 0  
## 97 0.00 0.00 0  
## 98 0.00 0.00 0  
## 102 0.00 0.00 0  
## 103 0.00 0.00 0  
## 104 15.38 0.00 0  
## 106 0.00 0.00 0  
## 107 0.00 0.00 0  
## 108 16.67 0.00 0  
## 109 0.00 0.00 0  
## 110 0.00 0.00 0  
## 111 0.00 0.00 0  
## 113 0.00 0.00 0  
## 114 11.11 0.00 0  
## 117 0.00 0.00 0  
## 119 0.00 0.00 0  
## 120 0.00 0.00 0  
## 121 0.00 0.00 0  
## 122 0.00 0.00 0  
## 123 0.00 0.00 0  
## 124 28.57 0.00 0  
## 127 0.00 0.00 0  
## 128 0.00 0.00 0  
## 129 0.00 0.00 0  
## 130 0.00 0.00 0  
## 136 0.00 0.00 0  
## 137 20.00 0.00 0  
## 138 0.00 0.00 0  
## 143 0.00 0.00 0  
## 145 66.67 33.33 0  
## 146 33.33 0.00 0  
## 147 33.33 33.33 0  
## 150 0.00 0.00 0  
## 151 0.00 0.00 0  
## 156 0.00 0.00 0  
## 157 0.00 0.00 0

##Tc  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.327 -2.327 -0.107 -0.025 47.673   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.327 1.147 2.029 0.0462 \*  
## CountrySEN -2.227 1.896 -1.174 0.2442   
## CountryMLI -2.221 1.793 -1.238 0.2197   
## CountryGUI -2.327 1.896 -1.227 0.2238   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 34.19767)  
##   
## Null deviance: 2479.8 on 73 degrees of freedom  
## Residual deviance: 2393.8 on 70 degrees of freedom  
## AIC: 477.27  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.327 -2.327 -0.107 -0.025 47.673   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.136e-15 1.510e+00 0.000 1.000  
## CountryBKF 2.327e+00 1.896e+00 1.227 0.224  
## CountrySEN 1.007e-01 2.135e+00 0.047 0.963  
## CountryMLI 1.067e-01 2.044e+00 0.052 0.959  
##   
## (Dispersion parameter for gaussian family taken to be 34.19767)  
##   
## Null deviance: 2479.8 on 73 degrees of freedom  
## Residual deviance: 2393.8 on 70 degrees of freedom  
## AIC: 477.27  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.327 -2.327 -0.107 -0.025 47.673   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.1067 1.3784 0.077 0.939  
## CountryGUI -0.1067 2.0444 -0.052 0.959  
## CountryBKF 2.2206 1.7931 1.238 0.220  
## CountrySEN -0.0060 2.0444 -0.003 0.998  
##   
## (Dispersion parameter for gaussian family taken to be 34.19767)  
##   
## Null deviance: 2479.8 on 73 degrees of freedom  
## Residual deviance: 2393.8 on 70 degrees of freedom  
## AIC: 477.27  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.327 -2.327 -0.107 -0.025 47.673   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.1007 1.5099 0.067 0.947  
## CountryMLI 0.0060 2.0444 0.003 0.998  
## CountryGUI -0.1007 2.1353 -0.047 0.963  
## CountryBKF 2.2266 1.8961 1.174 0.244  
##   
## (Dispersion parameter for gaussian family taken to be 34.19767)  
##   
## Null deviance: 2479.8 on 73 degrees of freedom  
## Residual deviance: 2393.8 on 70 degrees of freedom  
## AIC: 477.27  
##   
## Number of Fisher Scoring iterations: 2

##Tv  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -16.401 -2.974 6.900 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 18.166 3.992 4.551 2.19e-05 \*\*\*  
## CountrySEN 4.227 6.600 0.640 0.5240   
## CountryMLI -8.396 6.241 -1.345 0.1829   
## CountryGUI -15.192 6.600 -2.302 0.0243 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 414.3203)  
##   
## Null deviance: 32655 on 73 degrees of freedom  
## Residual deviance: 29002 on 70 degrees of freedom  
## AIC: 661.86  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -16.401 -2.974 6.900 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.974 5.256 0.566 0.5733   
## CountryBKF 15.192 6.600 2.302 0.0243 \*  
## CountrySEN 19.419 7.433 2.613 0.0110 \*  
## CountryMLI 6.796 7.116 0.955 0.3429   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 414.3203)  
##   
## Null deviance: 32655 on 73 degrees of freedom  
## Residual deviance: 29002 on 70 degrees of freedom  
## AIC: 661.86  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -16.401 -2.974 6.900 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 9.770 4.798 2.036 0.0455 \*  
## CountryGUI -6.796 7.116 -0.955 0.3429   
## CountryBKF 8.396 6.241 1.345 0.1829   
## CountrySEN 12.623 7.116 1.774 0.0804 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 414.3203)  
##   
## Null deviance: 32655 on 73 degrees of freedom  
## Residual deviance: 29002 on 70 degrees of freedom  
## AIC: 661.86  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -22.393 -16.401 -2.974 6.900 77.607   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 22.393 5.256 4.261 6.24e-05 \*\*\*  
## CountryMLI -12.623 7.116 -1.774 0.0804 .   
## CountryGUI -19.419 7.433 -2.613 0.0110 \*   
## CountryBKF -4.227 6.600 -0.640 0.5240   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 414.3203)  
##   
## Null deviance: 32655 on 73 degrees of freedom  
## Residual deviance: 29002 on 70 degrees of freedom  
## AIC: 661.86  
##   
## Number of Fisher Scoring iterations: 2

##Tsg  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -7.0781 -0.5853 0.0000 0.0000 26.2519   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 7.078 1.265 5.597 3.96e-07 \*\*\*  
## CountrySEN -6.493 2.091 -3.106 0.002741 \*\*   
## CountryMLI -7.078 1.977 -3.580 0.000629 \*\*\*  
## CountryGUI -7.078 2.091 -3.386 0.001168 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 41.57519)  
##   
## Null deviance: 3715.6 on 73 degrees of freedom  
## Residual deviance: 2910.3 on 70 degrees of freedom  
## AIC: 491.73  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -7.0781 -0.5853 0.0000 0.0000 26.2519   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.130e-15 1.665e+00 0.000 1.00000   
## CountryBKF 7.078e+00 2.091e+00 3.386 0.00117 \*\*  
## CountrySEN 5.853e-01 2.354e+00 0.249 0.80439   
## CountryMLI -2.100e-15 2.254e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 41.57519)  
##   
## Null deviance: 3715.6 on 73 degrees of freedom  
## Residual deviance: 2910.3 on 70 degrees of freedom  
## AIC: 491.73  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -7.0781 -0.5853 0.0000 0.0000 26.2519   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.864e-15 1.520e+00 0.00 1.000000   
## CountryGUI -3.082e-15 2.254e+00 0.00 1.000000   
## CountryBKF 7.078e+00 1.977e+00 3.58 0.000629 \*\*\*  
## CountrySEN 5.853e-01 2.254e+00 0.26 0.795885   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 41.57519)  
##   
## Null deviance: 3715.6 on 73 degrees of freedom  
## Residual deviance: 2910.3 on 70 degrees of freedom  
## AIC: 491.73  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -7.0781 -0.5853 0.0000 0.0000 26.2519   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.5853 1.6648 0.352 0.72620   
## CountryMLI -0.5853 2.2542 -0.260 0.79589   
## CountryGUI -0.5853 2.3544 -0.249 0.80439   
## CountryBKF 6.4927 2.0906 3.106 0.00274 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 41.57519)  
##   
## Null deviance: 3715.6 on 73 degrees of freedom  
## Residual deviance: 2910.3 on 70 degrees of freedom  
## AIC: 491.73  
##   
## Number of Fisher Scoring iterations: 2

##Tz  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.128 -2.161 -0.551 0.000 45.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.161 1.257 1.719 0.0901 .  
## CountrySEN 1.967 2.079 0.946 0.3473   
## CountryMLI -1.611 1.966 -0.819 0.4154   
## CountryGUI -2.161 2.079 -1.040 0.3021   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 41.10493)  
##   
## Null deviance: 3038.4 on 73 degrees of freedom  
## Residual deviance: 2877.3 on 70 degrees of freedom  
## AIC: 490.88  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.128 -2.161 -0.551 0.000 45.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.549e-15 1.655e+00 0.000 1.0000   
## CountryBKF 2.161e+00 2.079e+00 1.040 0.3021   
## CountrySEN 4.128e+00 2.341e+00 1.763 0.0822 .  
## CountryMLI 5.506e-01 2.241e+00 0.246 0.8067   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 41.10493)  
##   
## Null deviance: 3038.4 on 73 degrees of freedom  
## Residual deviance: 2877.3 on 70 degrees of freedom  
## AIC: 490.88  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.128 -2.161 -0.551 0.000 45.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.5506 1.5112 0.364 0.717  
## CountryGUI -0.5506 2.2414 -0.246 0.807  
## CountryBKF 1.6106 1.9658 0.819 0.415  
## CountrySEN 3.5774 2.2414 1.596 0.115  
##   
## (Dispersion parameter for gaussian family taken to be 41.10493)  
##   
## Null deviance: 3038.4 on 73 degrees of freedom  
## Residual deviance: 2877.3 on 70 degrees of freedom  
## AIC: 490.88  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -4.128 -2.161 -0.551 0.000 45.872   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 4.128 1.655 2.494 0.0150 \*  
## CountryMLI -3.577 2.241 -1.596 0.1150   
## CountryGUI -4.128 2.341 -1.763 0.0822 .  
## CountryBKF -1.967 2.079 -0.946 0.3473   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 41.10493)  
##   
## Null deviance: 3038.4 on 73 degrees of freedom  
## Residual deviance: 2877.3 on 70 degrees of freedom  
## AIC: 490.88  
##   
## Number of Fisher Scoring iterations: 2

##TcTz  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.07269 -0.07269 0.00000 0.00000 1.81731   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.07269 0.04344 1.673 0.0987 .  
## CountrySEN -0.07269 0.07182 -1.012 0.3150   
## CountryMLI -0.07269 0.06792 -1.070 0.2882   
## CountryGUI -0.07269 0.07182 -1.012 0.3150   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.04906731)  
##   
## Null deviance: 3.5238 on 73 degrees of freedom  
## Residual deviance: 3.4347 on 70 degrees of freedom  
## AIC: -7.1869  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.07269 -0.07269 0.00000 0.00000 1.81731   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 1.000e-16 5.719e-02 0.000 1.000  
## CountryBKF 7.269e-02 7.182e-02 1.012 0.315  
## CountrySEN -1.595e-16 8.088e-02 0.000 1.000  
## CountryMLI -3.881e-17 7.744e-02 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.04906731)  
##   
## Null deviance: 3.5238 on 73 degrees of freedom  
## Residual deviance: 3.4347 on 70 degrees of freedom  
## AIC: -7.1869  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.07269 -0.07269 0.00000 0.00000 1.81731   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 6.601e-16 5.221e-02 0.00 1.000  
## CountryGUI -6.140e-16 7.744e-02 0.00 1.000  
## CountryBKF 7.269e-02 6.792e-02 1.07 0.288  
## CountrySEN 3.251e-16 7.744e-02 0.00 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.04906731)  
##   
## Null deviance: 3.5238 on 73 degrees of freedom  
## Residual deviance: 3.4347 on 70 degrees of freedom  
## AIC: -7.1869  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.07269 -0.07269 0.00000 0.00000 1.81731   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 5.045e-17 5.719e-02 0.000 1.000  
## CountryMLI 5.705e-19 7.744e-02 0.000 1.000  
## CountryGUI -3.769e-16 8.088e-02 0.000 1.000  
## CountryBKF 7.269e-02 7.182e-02 1.012 0.315  
##   
## (Dispersion parameter for gaussian family taken to be 0.04906731)  
##   
## Null deviance: 3.5238 on 73 degrees of freedom  
## Residual deviance: 3.4347 on 70 degrees of freedom  
## AIC: -7.1869  
##   
## Number of Fisher Scoring iterations: 2

##TcTsg  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.1673 -0.1673 0.0000 0.0000 4.1827   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.16731 0.09999 1.673 0.0987 .  
## CountrySEN -0.16731 0.16530 -1.012 0.3150   
## CountryMLI -0.16731 0.15632 -1.070 0.2882   
## CountryGUI -0.16731 0.16530 -1.012 0.3150   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2599245)  
##   
## Null deviance: 18.667 on 73 degrees of freedom  
## Residual deviance: 18.195 on 70 degrees of freedom  
## AIC: 116.19  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.1673 -0.1673 0.0000 0.0000 4.1827   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.291e-17 1.316e-01 0.000 1.000  
## CountryBKF 1.673e-01 1.653e-01 1.012 0.315  
## CountrySEN 2.109e-17 1.862e-01 0.000 1.000  
## CountryMLI -5.640e-17 1.782e-01 0.000 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.2599245)  
##   
## Null deviance: 18.667 on 73 degrees of freedom  
## Residual deviance: 18.195 on 70 degrees of freedom  
## AIC: 116.19  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.1673 -0.1673 0.0000 0.0000 4.1827   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.389e-16 1.202e-01 0.00 1.000  
## CountryGUI 1.124e-16 1.782e-01 0.00 1.000  
## CountryBKF 1.673e-01 1.563e-01 1.07 0.288  
## CountrySEN -4.124e-17 1.782e-01 0.00 1.000  
##   
## (Dispersion parameter for gaussian family taken to be 0.2599245)  
##   
## Null deviance: 18.667 on 73 degrees of freedom  
## Residual deviance: 18.195 on 70 degrees of freedom  
## AIC: 116.19  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.1673 -0.1673 0.0000 0.0000 4.1827   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -1.795e-17 1.316e-01 0.000 1.000  
## CountryMLI 1.795e-17 1.782e-01 0.000 1.000  
## CountryGUI 6.700e-17 1.862e-01 0.000 1.000  
## CountryBKF 1.673e-01 1.653e-01 1.012 0.315  
##   
## (Dispersion parameter for gaussian family taken to be 0.2599245)  
##   
## Null deviance: 18.667 on 73 degrees of freedom  
## Residual deviance: 18.195 on 70 degrees of freedom  
## AIC: 116.19  
##   
## Number of Fisher Scoring iterations: 2

##TvTz  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.5133 -0.6254 0.0000 0.0000 13.8667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.6254 0.4631 1.350 0.181  
## CountrySEN 0.8879 0.7657 1.160 0.250  
## CountryMLI -0.6254 0.7241 -0.864 0.391  
## CountryGUI -0.6254 0.7657 -0.817 0.417  
##   
## (Dispersion parameter for gaussian family taken to be 5.576543)  
##   
## Null deviance: 414.37 on 73 degrees of freedom  
## Residual deviance: 390.36 on 70 degrees of freedom  
## AIC: 343.06  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.5133 -0.6254 0.0000 0.0000 13.8667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -5.162e-17 6.097e-01 0.000 1.0000   
## CountryBKF 6.254e-01 7.657e-01 0.817 0.4168   
## CountrySEN 1.513e+00 8.623e-01 1.755 0.0836 .  
## CountryMLI 2.329e-16 8.256e-01 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 5.576543)  
##   
## Null deviance: 414.37 on 73 degrees of freedom  
## Residual deviance: 390.36 on 70 degrees of freedom  
## AIC: 343.06  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.5133 -0.6254 0.0000 0.0000 13.8667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -4.846e-16 5.566e-01 0.000 1.000   
## CountryGUI 3.531e-16 8.256e-01 0.000 1.000   
## CountryBKF 6.254e-01 7.241e-01 0.864 0.391   
## CountrySEN 1.513e+00 8.256e-01 1.833 0.071 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 5.576543)  
##   
## Null deviance: 414.37 on 73 degrees of freedom  
## Residual deviance: 390.36 on 70 degrees of freedom  
## AIC: 343.06  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -1.5133 -0.6254 0.0000 0.0000 13.8667   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.5133 0.6097 2.482 0.0155 \*  
## CountryMLI -1.5133 0.8256 -1.833 0.0710 .  
## CountryGUI -1.5133 0.8623 -1.755 0.0836 .  
## CountryBKF -0.8879 0.7657 -1.160 0.2501   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 5.576543)  
##   
## Null deviance: 414.37 on 73 degrees of freedom  
## Residual deviance: 390.36 on 70 degrees of freedom  
## AIC: 343.06  
##   
## Number of Fisher Scoring iterations: 2

##TvTsg  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.81 0.00 0.00 0.00 55.86   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 10.810 1.912 5.653 3.18e-07 \*\*\*  
## CountrySEN -10.810 3.162 -3.419 0.001052 \*\*   
## CountryMLI -10.810 2.990 -3.615 0.000561 \*\*\*  
## CountryGUI -10.810 3.162 -3.419 0.001052 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 95.08083)  
##   
## Null deviance: 8626.3 on 73 degrees of freedom  
## Residual deviance: 6655.7 on 70 degrees of freedom  
## AIC: 552.94  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.81 0.00 0.00 0.00 55.86   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.304e-15 2.518e+00 0.000 1.00000   
## CountryBKF 1.081e+01 3.162e+00 3.419 0.00105 \*\*  
## CountrySEN -9.607e-15 3.561e+00 0.000 1.00000   
## CountryMLI -3.416e-15 3.409e+00 0.000 1.00000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 95.08083)  
##   
## Null deviance: 8626.3 on 73 degrees of freedom  
## Residual deviance: 6655.7 on 70 degrees of freedom  
## AIC: 552.94  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.81 0.00 0.00 0.00 55.86   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.000e+00 2.298e+00 0.000 1.000000   
## CountryGUI 0.000e+00 3.409e+00 0.000 1.000000   
## CountryBKF 1.081e+01 2.990e+00 3.615 0.000561 \*\*\*  
## CountrySEN -2.950e-15 3.409e+00 0.000 1.000000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 95.08083)  
##   
## Null deviance: 8626.3 on 73 degrees of freedom  
## Residual deviance: 6655.7 on 70 degrees of freedom  
## AIC: 552.94  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_TvTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -10.81 0.00 0.00 0.00 55.86   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -8.141e-15 2.518e+00 0.000 1.00000   
## CountryMLI 1.202e-14 3.409e+00 0.000 1.00000   
## CountryGUI 5.360e-15 3.561e+00 0.000 1.00000   
## CountryBKF 1.081e+01 3.162e+00 3.419 0.00105 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 95.08083)  
##   
## Null deviance: 8626.3 on 73 degrees of freedom  
## Residual deviance: 6655.7 on 70 degrees of freedom  
## AIC: 552.94  
##   
## Number of Fisher Scoring iterations: 2

##TvTsg  
data\_gpg$Country <- relevel(data\_gpg$Country, ref= "BKF")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.043 -3.043 0.000 0.000 30.287   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.043 1.067 2.853 0.00569 \*\*  
## CountrySEN -3.043 1.764 -1.726 0.08880 .   
## CountryMLI -3.043 1.668 -1.825 0.07228 .   
## CountryGUI -3.043 1.764 -1.726 0.08880 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 29.58359)  
##   
## Null deviance: 2227.1 on 73 degrees of freedom  
## Residual deviance: 2070.9 on 70 degrees of freedom  
## AIC: 466.55  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "GUI")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.043 -3.043 0.000 0.000 30.287   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 1.445e-15 1.404e+00 0.000 1.0000   
## CountryBKF 3.043e+00 1.764e+00 1.726 0.0888 .  
## CountrySEN -3.024e-15 1.986e+00 0.000 1.0000   
## CountryMLI -9.800e-16 1.902e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 29.58359)  
##   
## Null deviance: 2227.1 on 73 degrees of freedom  
## Residual deviance: 2070.9 on 70 degrees of freedom  
## AIC: 466.55  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "MLI")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.043 -3.043 0.000 0.000 30.287   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 2.586e-16 1.282e+00 0.000 1.0000   
## CountryGUI -2.568e-16 1.902e+00 0.000 1.0000   
## CountryBKF 3.043e+00 1.668e+00 1.825 0.0723 .  
## CountrySEN -1.009e-15 1.902e+00 0.000 1.0000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 29.58359)  
##   
## Null deviance: 2227.1 on 73 degrees of freedom  
## Residual deviance: 2070.9 on 70 degrees of freedom  
## AIC: 466.55  
##   
## Number of Fisher Scoring iterations: 2

data\_gpg$Country <- relevel(data\_gpg$Country, ref= "SEN")  
model1<-glm((Prev\_TzTsg) ~ Country,data=data\_gpg, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TzTsg) ~ Country, family = gaussian(), data = data\_gpg)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.043 -3.043 0.000 0.000 30.287   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -9.531e-16 1.404e+00 0.000 1.0000   
## CountryMLI 1.997e-15 1.902e+00 0.000 1.0000   
## CountryGUI 2.680e-16 1.986e+00 0.000 1.0000   
## CountryBKF 3.043e+00 1.764e+00 1.726 0.0888 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 29.58359)  
##   
## Null deviance: 2227.1 on 73 degrees of freedom  
## Residual deviance: 2070.9 on 70 degrees of freedom  
## AIC: 466.55  
##   
## Number of Fisher Scoring iterations: 2

#-------------------------------------------------------------------------------  
###For Gt  
data\_gt <- subset(data, Species=="Gt")  
data\_gt

## Country Localisation Species Sex Sample Prev\_Sod Prev\_Tspp Prev\_Tc Prev\_Tv  
## 2 BKF Comoe Gt F 2 0 16.54 1.10 13.24  
## 3 BKF Comoe Gt M 3 0 15.00 3.64 11.36  
## 11 BKF Folonzo Gt F 11 0 18.87 1.89 12.26  
## 14 BKF Folonzo Gt M 14 0 32.63 2.11 27.37  
## 24 GHA Walewale Gt M 24 0 53.85 3.85 12.82  
## 43 GHA Walewale Gt F 43 0 66.04 1.89 9.43  
## 44 BKF Arly Gt F 44 0 1.89 0.00 0.00  
## 55 BKF Arly Gt M 55 0 0.00 0.00 0.00  
## 69 GHA MorURTi Gt M 69 0 50.00 0.00 15.63  
## 70 BKF Sissili Gt M 70 0 25.00 12.50 12.50  
## 95 GHA Bougouhiya Gt F 95 0 18.75 0.00 6.25  
## 99 BKF Sissili Gt F 99 0 13.33 6.67 6.67  
## 112 GHA MorURTi Gt F 112 0 66.67 0.00 0.00  
## 116 GHA Fumbissi Gt F 116 0 100.00 0.00 0.00  
## 125 GHA Fumbissi Gt M 125 0 100.00 0.00 66.67  
## 126 GHA Grogro Gt M 126 0 100.00 0.00 0.00  
## 133 GHA Grogro Gt F 133 0 100.00 0.00 80.00  
## 134 GHA Kumpole Gt F 134 0 100.00 0.00 40.00  
## 135 GHA Sissili Bidge Gt F 135 0 100.00 0.00 20.00  
## 142 GHA Bougouhiya Gt M 142 0 0.00 0.00 0.00  
## 148 GHA Kumpole Gt M 148 0 100.00 0.00 50.00  
## 149 GHA Psikp\_ Gt M 149 0 100.00 0.00 0.00  
## 152 GHA Kandiaga Gt M 152 0 100.00 0.00 0.00  
## 153 GHA Sissili Bidge Gt M 153 0 100.00 0.00 0.00  
## 154 GHA Nabogo Gt F 154 0 0.00 0.00 0.00  
## 155 GHA Volta Blanche Gt F 155 0 0.00 0.00 0.00  
## Prev\_Tz Prev\_Tsg Prev\_TcTv Prev\_TcTz Prev\_TcTsg Prev\_TvTz Prev\_TvTsg  
## 2 0.37 0 0.74 1.10 0 0.00 0  
## 3 0.00 0 0.00 0.00 0 0.00 0  
## 11 1.89 0 1.89 0.94 0 0.00 0  
## 14 1.05 0 0.00 1.05 0 1.05 0  
## 24 8.97 0 0.00 10.26 0 14.10 0  
## 43 24.53 0 0.00 16.98 0 7.55 0  
## 44 1.89 0 0.00 0.00 0 0.00 0  
## 55 0.00 0 0.00 0.00 0 0.00 0  
## 69 15.63 0 0.00 18.75 0 0.00 0  
## 70 0.00 0 0.00 0.00 0 0.00 0  
## 95 0.00 0 0.00 0.00 0 12.50 0  
## 99 0.00 0 0.00 0.00 0 0.00 0  
## 112 33.33 0 0.00 22.22 0 11.11 0  
## 116 37.50 0 0.00 0.00 0 62.50 0  
## 125 33.33 0 0.00 0.00 0 0.00 0  
## 126 16.67 0 0.00 0.00 0 83.33 0  
## 133 20.00 0 0.00 0.00 0 0.00 0  
## 134 60.00 0 0.00 0.00 0 0.00 0  
## 135 80.00 0 0.00 0.00 0 0.00 0  
## 142 0.00 0 0.00 0.00 0 0.00 0  
## 148 50.00 0 0.00 0.00 0 0.00 0  
## 149 50.00 0 0.00 0.00 0 50.00 0  
## 152 100.00 0 0.00 0.00 0 0.00 0  
## 153 100.00 0 0.00 0.00 0 0.00 0  
## 154 0.00 0 0.00 0.00 0 0.00 0  
## 155 0.00 0 0.00 0.00 0 0.00 0  
## Prev\_TzTsg Prev\_TcTvTz  
## 2 0 0.00  
## 3 0 0.00  
## 11 0 0.00  
## 14 0 0.00  
## 24 0 1.28  
## 43 0 5.66  
## 44 0 0.00  
## 55 0 0.00  
## 69 0 0.00  
## 70 0 0.00  
## 95 0 0.00  
## 99 0 0.00  
## 112 0 0.00  
## 116 0 0.00  
## 125 0 0.00  
## 126 0 0.00  
## 133 0 0.00  
## 134 0 0.00  
## 135 0 0.00  
## 142 0 0.00  
## 148 0 0.00  
## 149 0 0.00  
## 152 0 0.00  
## 153 0 0.00  
## 154 0 0.00  
## 155 0 0.00

##Tc  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_Tc) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tc) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.4888 -0.3189 -0.3189 -0.3189 9.0112   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 3.4888 0.8612 4.051 0.000463 \*\*\*  
## CountryGHA -3.1699 1.0351 -3.062 0.005348 \*\*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 5.933994)  
##   
## Null deviance: 198.07 on 25 degrees of freedom  
## Residual deviance: 142.42 on 24 degrees of freedom  
## AIC: 124  
##   
## Number of Fisher Scoring iterations: 2

##TV  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_Tv) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tv) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -16.711 -16.711 -5.586 2.630 63.289   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 10.425 7.702 1.354 0.188  
## CountryGHA 6.286 9.257 0.679 0.504  
##   
## (Dispersion parameter for gaussian family taken to be 474.5787)  
##   
## Null deviance: 11609 on 25 degrees of freedom  
## Residual deviance: 11390 on 24 degrees of freedom  
## AIC: 237.93  
##   
## Number of Fisher Scoring iterations: 2

##Tsg  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_Tsg) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tsg) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0 0 NA NA  
## CountryGHA 0 0 NA NA  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 0 on 25 degrees of freedom  
## Residual deviance: 0 on 24 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

##Tz  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_Tz) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_Tz) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -34.998 -17.495 -0.650 2.187 65.002   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.650 9.733 0.067 0.94731   
## CountryGHA 34.348 11.698 2.936 0.00722 \*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 757.925)  
##   
## Null deviance: 24724 on 25 degrees of freedom  
## Residual deviance: 18190 on 24 degrees of freedom  
## AIC: 250.1  
##   
## Number of Fisher Scoring iterations: 2

##TcTV  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_TcTv) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTv) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3287 0.0000 0.0000 0.0000 1.5613   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 0.3288 0.1302 2.525 0.0186 \*  
## CountryGHA -0.3288 0.1565 -2.101 0.0463 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.1356286)  
##   
## Null deviance: 3.8537 on 25 degrees of freedom  
## Residual deviance: 3.2551 on 24 degrees of freedom  
## AIC: 25.76  
##   
## Number of Fisher Scoring iterations: 2

##TcTz  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_TcTz) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTz) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -3.7894 -3.7894 -3.7894 0.3188 18.4306   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.3862 2.2620 0.171 0.866  
## CountryGHA 3.4032 2.7186 1.252 0.223  
##   
## (Dispersion parameter for gaussian family taken to be 40.93348)  
##   
## Null deviance: 1046.5 on 25 degrees of freedom  
## Residual deviance: 982.4 on 24 degrees of freedom  
## AIC: 174.21  
##   
## Number of Fisher Scoring iterations: 2

##TcTsg  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_TcTsg) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTsg) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## 0 0 0 0 0   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0 0 NA NA  
## CountryGHA 0 0 NA NA  
##   
## (Dispersion parameter for gaussian family taken to be 0)  
##   
## Null deviance: 0 on 25 degrees of freedom  
## Residual deviance: 0 on 24 degrees of freedom  
## AIC: -Inf  
##   
## Number of Fisher Scoring iterations: 1

##TvTz  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_TvTz) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TvTz) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -13.394 -13.394 -1.589 -0.131 69.936   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) 0.1312 7.4503 0.018 0.986  
## CountryGHA 13.2626 8.9542 1.481 0.152  
##   
## (Dispersion parameter for gaussian family taken to be 444.0611)  
##   
## Null deviance: 11632 on 25 degrees of freedom  
## Residual deviance: 10657 on 24 degrees of freedom  
## AIC: 236.2  
##   
## Number of Fisher Scoring iterations: 2

##TcTvTz  
data\_gt$Country <- relevel(data\_gt$Country, ref= "BKF")  
model1<-glm((Prev\_TcTvTz) ~ Country,data=data\_gt, family=gaussian())  
summary(model1)

##   
## Call:  
## glm(formula = (Prev\_TcTvTz) ~ Country, family = gaussian(), data = data\_gt)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -0.3856 -0.3856 -0.3856 0.0000 5.2744   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)  
## (Intercept) -6.097e-16 4.018e-01 0.000 1.000  
## CountryGHA 3.856e-01 4.829e-01 0.798 0.432  
##   
## (Dispersion parameter for gaussian family taken to be 1.291594)  
##   
## Null deviance: 31.822 on 25 degrees of freedom  
## Residual deviance: 30.998 on 24 degrees of freedom  
## AIC: 84.356  
##   
## Number of Fisher Scoring iterations: 2

## Preparation of Figure 4

data\_sodqpcr=read.csv("rawdata\_fig4\_dataqpcr.csv")  
data\_sodqpcr

## Sample Species Country copy\_number\_corrected.per.fly log\_copy  
## 1 A G.m Ken 1052227.45 6.02  
## 2 A G.m Ken 1027001.16 6.01  
## 3 A G.m Ken 1023120.19 6.01  
## 4 A G.m Ken 5603115.00 6.75  
## 5 A G.m Ken 4966500.00 6.70  
## 6 A G.m Ken 5341245.00 6.73  
## 7 A G.m Ken 272400.38 5.44  
## 8 A G.m Ken 256746.95 5.41  
## 9 A G.m Ken 356806.13 5.55  
## 10 A G.m Ken 12208549.27 7.09  
## 11 A G.m Ken 13125132.16 7.12  
## 12 A G.m Ken 12216919.89 7.09  
## 13 A G.m Ken 645518.77 5.81  
## 14 A G.m Ken 676953.08 5.83  
## 15 A G.m Ken 669246.60 5.83  
## 16 A G.m Ken 2907825.97 6.46  
## 17 A G.m Ken 3374021.40 6.53  
## 18 A G.m Ken 3457464.94 6.54  
## 19 A G.m Ken 3423114.71 6.53  
## 20 A G.m Ken 614100.77 5.79  
## 21 A G.m Ken 516256.62 5.71  
## 22 A G.m Ken 1808072.61 6.26  
## 23 A G.m Ken 2973891.21 6.47  
## 24 A G.m Ken 1961518.45 6.29  
## 25 A G.m Ken 905739.16 5.96  
## 26 A G.m Ken 886696.02 5.95  
## 27 A G.m Ken 804572.50 5.91  
## 28 A G.m Ken 250735.18 5.40  
## 29 A G.m Ken 1344821.04 6.13  
## 30 A G.m Ken 1505614.86 6.18  
## 31 A G.m Ken 684950.46 5.84  
## 32 A G.m Ken 630574.17 5.80  
## 33 A G.m Ken 564273.26 5.75  
## 34 A G.m Ken 223782.47 5.35  
## 35 A G.m Ken 201414.77 5.30  
## 36 A G.m Ken 181895.79 5.26  
## 37 A G.m Ken 1542650.80 6.19  
## 38 A G.m Ken 1714853.68 6.23  
## 39 A G.m Ken 1468208.93 6.17  
## 40 A G.m Zim 2600739.64 6.42  
## 41 A G.m Zim 2550570.36 6.41  
## 42 A G.m Zim 2560425.04 6.41  
## 43 A G.m Zim 3582643.40 6.55  
## 44 A G.m Zim 3540592.30 6.55  
## 45 A G.m Zim 3719862.79 6.57  
## 46 A G.m Zim 21886249.20 7.34  
## 47 A G.m Zim 5152192.14 6.71  
## 48 A G.m Zim 2196170.46 6.34  
## 49 A G.m Zim 1959602.48 6.29  
## 50 A G.m Zim 3006462.36 6.48  
## 51 A G.m Zim 4871250.21 6.69  
## 52 A G.m Zim 4461318.75 6.65  
## 53 A G.m Zim 4451121.45 6.65  
## 54 A G.p Eth 4105792.26 6.61  
## 55 A G.p Eth 3964434.78 6.60  
## 56 A G.p Eth 3185897.75 6.50  
## 57 A G.p Eth 2926772.25 6.47  
## 58 A G.p Eth 2956410.45 6.47  
## 59 A G.p Eth 3536825.20 6.55  
## 60 A G.p Ken 253637.59 5.40  
## 61 A G.p Ken 262660.71 5.42  
## 62 A G.p Ken 256278.50 5.41  
## 63 A G.p Ken 15725.73 4.20  
## 64 A G.p Ken 16857.07 4.23  
## 65 A G.p Ken 4972.94 3.70  
## 66 A G.p Ken 7221.39 3.86  
## 67 A G.p Ken 8997.20 3.95  
## 68 A G.p Ken 9233957.60 6.97  
## 69 A G.p Ken 8894524.80 6.95  
## 70 A G.p Ken 8139460.00 6.91  
## 71 A G.p Ken 752835.83 5.88  
## 72 A G.p Ken 833772.53 5.92  
## 73 A G.p Ken 728305.78 5.86  
## 74 A G.p Ken 1765650.25 6.25  
## 75 A G.p Ken 1968265.85 6.29  
## 76 A G.p Ken 1961504.95 6.29  
## 77 A G.p Ken 3549700.00 6.55  
## 78 A G.p Ken 3329111.50 6.52  
## 79 A G.p Ken 3151626.50 6.50  
## 80 A G.p Ken 962698.10 5.98  
## 81 A G.p Ken 1143055.77 6.06  
## 82 A G.p Ken 1191733.62 6.08  
## 83 A G.p Ken 1015960.30 6.01  
## 84 A G.p Ken 1205362.82 6.08  
## 85 A G.p Ken 1133481.14 6.05  
## 86 A G.p Ken 1472527.87 6.17  
## 87 A G.p Ken 1308940.95 6.12  
## 88 A G.p Ken 1281185.22 6.11  
## 89 A G.p Ken 4105627.56 6.61  
## 90 A G.p Ken 3459869.64 6.54  
## 91 A G.p Ken 3122746.02 6.49  
## 92 A G.p Ken 953219.87 5.98  
## 93 A G.p Ken 1385815.69 6.14  
## 94 A G.p Ken 1019450.62 6.01  
## 95 A G.p Ken 3010949.92 6.48  
## 96 A G.p Ken 3137601.25 6.50  
## 97 A G.p Ken 3015783.94 6.48  
## 98 A G.p Ken 29382.30 4.47  
## 99 A G.p Ken 32657.98 4.51  
## 100 A G.p Ken 27542.41 4.44  
## 101 A G.p Ken 1130434.50 6.05  
## 102 A G.p Ken 1071464.00 6.03  
## 103 A G.p Ken 1115442.00 6.05  
## 104 A G.p Ken 1987645.10 6.30  
## 105 A G.p Ken 2014324.90 6.30  
## 106 A G.p Ken 1922851.30 6.28  
## 107 A G.p Ken 1427522.32 6.15  
## 108 A G.p Ken 1666099.34 6.22  
## 109 A G.p Ken 1353322.67 6.13  
## 110 A G.p Tan 1446373.96 6.16  
## 111 A G.p Tan 1610826.54 6.21  
## 112 A G.p Tan 1561400.90 6.19  
## 113 A G.p Tan 1518448.88 6.18  
## 114 A G.p Tan 1925225.12 6.28  
## 115 A G.p Tan 1662840.76 6.22  
## 116 A G.p Tan 81575.76 4.91  
## 117 A G.p Tan 96277.70 4.98  
## 118 A G.p Tan 98279.91 4.99  
## 119 A G.p Tan 952425.25 5.98  
## 120 A G.p Tan 1186677.01 6.07  
## 121 A G.p Tan 1273054.06 6.10  
## 122 A G.p Tan 1088968.62 6.04  
## 123 A G.p Tan 1194766.35 6.08  
## 124 A G.p Tan 1155760.12 6.06  
## 125 A G.p Tan 1828842.13 6.26  
## 126 A G.p Tan 1987235.76 6.30  
## 127 A G.p Tan 1811666.91 6.26  
## 128 A G.p Tan 1053273.92 6.02  
## 129 A G.p Tan 3315587.63 6.52  
## 130 A G.p Tan 1656557.58 6.22  
## 131 A G.p Tan 661127.46 5.82  
## 132 A G.p Tan 768632.08 5.89  
## 133 A G.p Tan 684498.03 5.84  
## 134 A G.p Tan 1811973.66 6.26  
## 135 A G.p Tan 1956220.20 6.29  
## 136 A G.p Tan 2317824.54 6.37  
## 137 A G.p Tan 909065.20 5.96  
## 138 A G.p Tan 1013218.39 6.01  
## 139 A G.p Tan 1032482.08 6.01  
## 140 A G.p Tan 1063799.07 6.03  
## 141 A G.p Tan 565663.17 5.75  
## 142 A G.p Tan 1195693.09 6.08  
## 143 A G.p Tan 1336170.69 6.13  
## 144 A G.p Tan 624448.61 5.80  
## 145 A G.p Tan 460994.06 5.66  
## 146 A G.p Tan 474771.75 5.68  
## 147 A G.p Tan 471792.79 5.67  
## 148 A G.p Tan 543356.45 5.74  
## 149 A G.p Tan 462562.66 5.67  
## 150 A G.p Tan 468385.63 5.67  
## 151 A G.p Tan 800831.26 5.90  
## 152 A G.p Tan 860329.81 5.93  
## 153 A G.p Tan 1046502.69 6.02  
## 154 A G.p Tan 1901818.67 6.28  
## 155 A G.p Tan 2063108.97 6.31  
## 156 A G.p Tan 2297758.73 6.36  
## 157 C G.m Ken 1728659.02 6.24  
## 158 C G.m Ken 1738898.78 6.24  
## 159 C G.m Ken 1251346.19 6.10  
## 160 C G.m Ken 285983.07 5.46  
## 161 C G.m Ken 235748.21 5.37  
## 162 C G.m Ken 240005.40 5.38  
## 163 C G.m Ken 2844165.32 6.45  
## 164 C G.m Ken 2543434.64 6.41  
## 165 C G.m Ken 2202409.98 6.34  
## 166 C G.m Ken 573892.40 5.76  
## 167 C G.m Ken 492440.89 5.69  
## 168 C G.m Ken 497065.13 5.70  
## 169 C G.m Ken 1493017.24 6.17  
## 170 C G.m Ken 1573266.65 6.20  
## 171 C G.m Ken 1428103.45 6.15  
## 172 C G.m Ken 1775848.62 6.25  
## 173 C G.m Ken 1544673.06 6.19  
## 174 C G.m Ken 1607720.94 6.21  
## 175 C G.m Ken 1512030.00 6.18  
## 176 C G.m Ken 1919580.24 6.28  
## 177 C G.m Ken 1430147.76 6.16  
## 178 C G.m Ken 9759.00 3.99  
## 179 C G.m Ken 5126922.81 6.71  
## 180 C G.m Ken 4590132.05 6.66  
## 181 C G.m Ken 4123580.93 6.62  
## 182 C G.m Ken 3787420.87 6.58  
## 183 C G.m Ken 2531907.19 6.40  
## 184 C G.m Ken 3496918.79 6.54  
## 185 C G.m Ken 1055567.60 6.02  
## 186 C G.m Ken 1326785.10 6.12  
## 187 C G.m Ken 1226611.80 6.09  
## 188 C G.m Ken 207413.72 5.32  
## 189 C G.m Ken 410464.12 5.61  
## 190 C G.m Ken 374778.37 5.57  
## 191 C G.m Ken 1388464.70 6.14  
## 192 C G.m Ken 1181371.66 6.07  
## 193 C G.m Ken 1325866.12 6.12  
## 194 C G.m Ken 1810416.87 6.26  
## 195 C G.m Ken 1613200.61 6.21  
## 196 C G.m Ken 1615328.85 6.21  
## 197 C G.m Ken 893671.70 5.95  
## 198 C G.m Ken 1143673.53 6.06  
## 199 C G.m Ken 1031229.27 6.01  
## 200 C G.m Ken 1113839.36 6.05  
## 201 C G.m Ken 997034.78 6.00  
## 202 C G.m Ken 1027653.46 6.01  
## 203 C G.p Ken 718805.85 5.86  
## 204 C G.p Ken 725343.15 5.86  
## 205 C G.p Ken 599202.98 5.78  
## 206 C G.p Ken 677917.76 5.83  
## 207 C G.p Ken 637347.20 5.80  
## 208 C G.p Ken 643047.98 5.81  
## 209 C G.p Ken 880761.89 5.94  
## 210 C G.p Ken 988591.31 6.00  
## 211 C G.p Ken 767819.86 5.89  
## 212 C G.p Ken 916317.90 5.96  
## 213 C G.p Ken 1005044.48 6.00  
## 214 C G.p Ken 1078852.43 6.03  
## 215 C G.p Ken 739683.64 5.87  
## 216 C G.p Ken 695705.76 5.84  
## 217 C G.p Ken 682878.87 5.83  
## 218 C G.p Ken 631131.07 5.80  
## 219 C G.p Ken 641502.40 5.81  
## 220 C G.p Ken 566131.46 5.75  
## 221 C G.p Ken 1015118.40 6.01  
## 222 C G.p Ken 1094571.76 6.04  
## 223 C G.p Ken 947443.84 5.98  
## 224 C G.p Ken 204534.77 5.31  
## 225 C G.p Ken 280568.34 5.45  
## 226 C G.p Ken 165776.91 5.22  
## 227 C G.p Ken 2924446.34 6.47  
## 228 C G.p Ken 2826128.98 6.45  
## 229 C G.p Ken 2171559.77 6.34  
## 230 C G.p Ken 897908.45 5.95  
## 231 C G.p Ken 898818.18 5.95  
## 232 C G.p Ken 973113.21 5.99  
## 233 C G.p Ken 1059270.91 6.03  
## 234 C G.p Ken 977397.96 5.99  
## 235 C G.p Ken 1060751.81 6.03  
## 236 C G.p Ken 2808715.95 6.45  
## 237 C G.p Ken 2968453.35 6.47  
## 238 C G.p Ken 2803391.37 6.45  
## 239 C G.p Ken 332666.77 5.52  
## 240 C G.p Ken 321241.25 5.51  
## 241 C G.p Ken 320209.27 5.51  
## 242 C G.p Ken 1200292.42 6.08  
## 243 C G.p Ken 971056.86 5.99  
## 244 C G.p Ken 908298.93 5.96  
## 245 C G.p Ken 2279974.49 6.36  
## 246 C G.p Ken 1883112.09 6.27  
## 247 C G.p Ken 1932719.89 6.29  
## 248 C G.p Ken 194752.82 5.29  
## 249 C G.p Ken 184438.27 5.27  
## 250 C G.p Ken 179193.58 5.25  
## 251 C G.p Tan 1210058.85 6.08  
## 252 C G.p Tan 1282992.80 6.11  
## 253 C G.p Tan 1551156.03 6.19  
## 254 C G.p Tan 1241956.64 6.09  
## 255 C G.p Tan 1661873.21 6.22  
## 256 C G.p Tan 1736841.36 6.24  
## 257 C G.p Tan 983613.85 5.99  
## 258 C G.p Tan 1210460.94 6.08  
## 259 C G.p Tan 1431819.79 6.16  
## 260 C G.p Tan 1293304.16 6.11  
## 261 C G.p Tan 1746187.17 6.24  
## 262 C G.p Tan 1950091.85 6.29  
## 263 C G.p Tan 1641382.66 6.22  
## 264 C G.p Tan 1549406.98 6.19  
## 265 C G.p Tan 1484065.92 6.17  
## 266 C G.p Tan 537760.05 5.73  
## 267 C G.p Tan 605603.38 5.78  
## 268 C G.p Tan 657568.48 5.82  
## 269 C G.p Tan 599201.28 5.78  
## 270 C G.p Tan 699494.40 5.84  
## 271 C G.p Tan 517363.20 5.71  
## 272 C G.p Tan 708694.56 5.85  
## 273 C G.p Tan 858284.28 5.93  
## 274 C G.p Tan 854924.70 5.93  
## 275 C G.p Tan 333963.04 5.52  
## 276 C G.p Tan 359125.40 5.56  
## 277 C G.p Tan 270383.12 5.43  
## 278 C G.p Tan 528792.52 5.72  
## 279 C G.p Tan 590464.75 5.77  
## 280 C G.p Tan 648716.88 5.81  
## 281 C G.p Tan 269764.32 5.43  
## 282 C G.p Tan 281597.65 5.45  
## 283 C G.p Tan 298947.26 5.48  
## 284 C G.p Tan 3249.22 3.51  
## 285 C G.p Tan 5522.06 3.74  
## 286 C G.p Tan 7960.32 3.90  
## 287 C G.p Tan 8036502.48 6.91  
## 288 C G.p Tan 7169820.84 6.86  
## 289 C G.p Tan 7373359.71 6.87  
## 290 C G.p Tan 1951057.33 6.29  
## 291 C G.p Tan 1641346.31 6.22  
## 292 C G.p Tan 1720707.21 6.24  
## 293 C G.p Tan 5444975.94 6.74  
## 294 C G.p Tan 4577024.47 6.66  
## 295 C G.p Tan 3491578.15 6.54  
## 296 C G.p Tan 2068.34 3.32  
## 297 C G.p Tan 3294.06 3.52  
## 298 C G.p Tan 1215.40 3.08

str(data\_sodqpcr)

## 'data.frame': 298 obs. of 5 variables:  
## $ Sample : chr "A" "A" "A" "A" ...  
## $ Species : chr "G.m" "G.m" "G.m" "G.m" ...  
## $ Country : chr "Ken" "Ken" "Ken" "Ken" ...  
## $ copy\_number\_corrected.per.fly: num 1052227 1027001 1023120 5603115 4966500 ...  
## $ log\_copy : num 6.02 6.01 6.01 6.75 6.7 6.73 5.44 5.41 5.55 7.09 ...

attach(data\_sodqpcr)

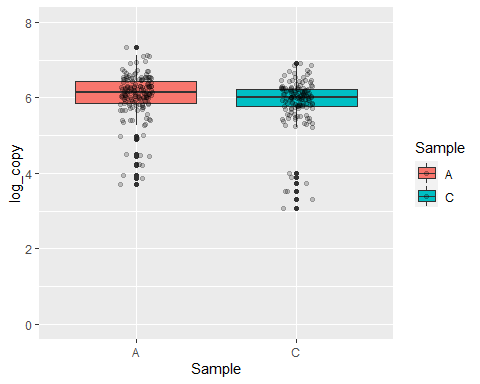
## The following objects are masked from data (pos = 3):  
##   
## Country, Sample, Species

## The following objects are masked from data (pos = 4):  
##   
## Country, Sample, Species

head(data\_sodqpcr)

## Sample Species Country copy\_number\_corrected.per.fly log\_copy  
## 1 A G.m Ken 1052227 6.02  
## 2 A G.m Ken 1027001 6.01  
## 3 A G.m Ken 1023120 6.01  
## 4 A G.m Ken 5603115 6.75  
## 5 A G.m Ken 4966500 6.70  
## 6 A G.m Ken 5341245 6.73

data\_sodqpcr=na.omit(data\_sodqpcr)  
  
fig4.tiff<-ggplot(data\_sodqpcr,aes(x=Sample ,y=log\_copy, fill=Sample)) +  
 geom\_boxplot() + geom\_jitter(width=0.1,alpha=0.2)+ ylim(0, 8)  
fig4.tiff



tiff("fig4.tiff", width = 4, height = 4, units = 'in', res = 300)  
plot(fig4.tiff+theme\_tufte() + theme(axis.line = element\_line(size = 1, colour = "black"))+ theme(legend.position = c(.95, .35),legend.justification = c("right", "top"))) + xlab(expression(bolditalic("Infection type"))) + ylab( expression (paste (bold("log10 "), bolditalic("Sodalis"), bold(" copy number"))))  
dev.off()

## png   
## 2

model1<-glm(log\_copy ~ Sample, data = data\_sodqpcr)  
summary(model1)

##   
## Call:  
## glm(formula = log\_copy ~ Sample, data = data\_sodqpcr)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.8151 -0.1568 0.1028 0.3449 1.2907   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.04929 0.04969 121.738 <2e-16 \*\*\*  
## SampleC -0.15415 0.07199 -2.141 0.0331 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.3851965)  
##   
## Null deviance: 115.78 on 297 degrees of freedom  
## Residual deviance: 114.02 on 296 degrees of freedom  
## AIC: 565.39  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

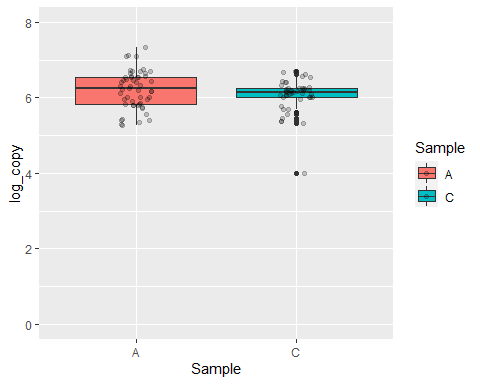
## Analysis of Deviance Table (Type II tests)  
##   
## Response: log\_copy  
## LR Chisq Df Pr(>Chisq)   
## Sample 4.5859 1 0.03224 \*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Supplementary figure 2

# supplementary figure 2A  
Gmm <- subset(data\_sodqpcr, Species=="G.m")  
Gmm

## Sample Species Country copy\_number\_corrected.per.fly log\_copy  
## 1 A G.m Ken 1052227.4 6.02  
## 2 A G.m Ken 1027001.2 6.01  
## 3 A G.m Ken 1023120.2 6.01  
## 4 A G.m Ken 5603115.0 6.75  
## 5 A G.m Ken 4966500.0 6.70  
## 6 A G.m Ken 5341245.0 6.73  
## 7 A G.m Ken 272400.4 5.44  
## 8 A G.m Ken 256747.0 5.41  
## 9 A G.m Ken 356806.1 5.55  
## 10 A G.m Ken 12208549.3 7.09  
## 11 A G.m Ken 13125132.2 7.12  
## 12 A G.m Ken 12216919.9 7.09  
## 13 A G.m Ken 645518.8 5.81  
## 14 A G.m Ken 676953.1 5.83  
## 15 A G.m Ken 669246.6 5.83  
## 16 A G.m Ken 2907826.0 6.46  
## 17 A G.m Ken 3374021.4 6.53  
## 18 A G.m Ken 3457464.9 6.54  
## 19 A G.m Ken 3423114.7 6.53  
## 20 A G.m Ken 614100.8 5.79  
## 21 A G.m Ken 516256.6 5.71  
## 22 A G.m Ken 1808072.6 6.26  
## 23 A G.m Ken 2973891.2 6.47  
## 24 A G.m Ken 1961518.4 6.29  
## 25 A G.m Ken 905739.2 5.96  
## 26 A G.m Ken 886696.0 5.95  
## 27 A G.m Ken 804572.5 5.91  
## 28 A G.m Ken 250735.2 5.40  
## 29 A G.m Ken 1344821.0 6.13  
## 30 A G.m Ken 1505614.9 6.18  
## 31 A G.m Ken 684950.5 5.84  
## 32 A G.m Ken 630574.2 5.80  
## 33 A G.m Ken 564273.3 5.75  
## 34 A G.m Ken 223782.5 5.35  
## 35 A G.m Ken 201414.8 5.30  
## 36 A G.m Ken 181895.8 5.26  
## 37 A G.m Ken 1542650.8 6.19  
## 38 A G.m Ken 1714853.7 6.23  
## 39 A G.m Ken 1468208.9 6.17  
## 40 A G.m Zim 2600739.6 6.42  
## 41 A G.m Zim 2550570.4 6.41  
## 42 A G.m Zim 2560425.0 6.41  
## 43 A G.m Zim 3582643.4 6.55  
## 44 A G.m Zim 3540592.3 6.55  
## 45 A G.m Zim 3719862.8 6.57  
## 46 A G.m Zim 21886249.2 7.34  
## 47 A G.m Zim 5152192.1 6.71  
## 48 A G.m Zim 2196170.5 6.34  
## 49 A G.m Zim 1959602.5 6.29  
## 50 A G.m Zim 3006462.4 6.48  
## 51 A G.m Zim 4871250.2 6.69  
## 52 A G.m Zim 4461318.8 6.65  
## 53 A G.m Zim 4451121.5 6.65  
## 157 C G.m Ken 1728659.0 6.24  
## 158 C G.m Ken 1738898.8 6.24  
## 159 C G.m Ken 1251346.2 6.10  
## 160 C G.m Ken 285983.1 5.46  
## 161 C G.m Ken 235748.2 5.37  
## 162 C G.m Ken 240005.4 5.38  
## 163 C G.m Ken 2844165.3 6.45  
## 164 C G.m Ken 2543434.6 6.41  
## 165 C G.m Ken 2202410.0 6.34  
## 166 C G.m Ken 573892.4 5.76  
## 167 C G.m Ken 492440.9 5.69  
## 168 C G.m Ken 497065.1 5.70  
## 169 C G.m Ken 1493017.2 6.17  
## 170 C G.m Ken 1573266.6 6.20  
## 171 C G.m Ken 1428103.4 6.15  
## 172 C G.m Ken 1775848.6 6.25  
## 173 C G.m Ken 1544673.1 6.19  
## 174 C G.m Ken 1607720.9 6.21  
## 175 C G.m Ken 1512030.0 6.18  
## 176 C G.m Ken 1919580.2 6.28  
## 177 C G.m Ken 1430147.8 6.16  
## 178 C G.m Ken 9759.0 3.99  
## 179 C G.m Ken 5126922.8 6.71  
## 180 C G.m Ken 4590132.0 6.66  
## 181 C G.m Ken 4123580.9 6.62  
## 182 C G.m Ken 3787420.9 6.58  
## 183 C G.m Ken 2531907.2 6.40  
## 184 C G.m Ken 3496918.8 6.54  
## 185 C G.m Ken 1055567.6 6.02  
## 186 C G.m Ken 1326785.1 6.12  
## 187 C G.m Ken 1226611.8 6.09  
## 188 C G.m Ken 207413.7 5.32  
## 189 C G.m Ken 410464.1 5.61  
## 190 C G.m Ken 374778.4 5.57  
## 191 C G.m Ken 1388464.7 6.14  
## 192 C G.m Ken 1181371.7 6.07  
## 193 C G.m Ken 1325866.1 6.12  
## 194 C G.m Ken 1810416.9 6.26  
## 195 C G.m Ken 1613200.6 6.21  
## 196 C G.m Ken 1615328.9 6.21  
## 197 C G.m Ken 893671.7 5.95  
## 198 C G.m Ken 1143673.5 6.06  
## 199 C G.m Ken 1031229.3 6.01  
## 200 C G.m Ken 1113839.4 6.05  
## 201 C G.m Ken 997034.8 6.00  
## 202 C G.m Ken 1027653.5 6.01

sup\_fig2a<-ggplot(Gmm,aes(x=Sample ,y=log\_copy, fill=Sample)) +  
 geom\_boxplot() + geom\_jitter(width=0.1,alpha=0.2)+ ylim(0, 8)  
sup\_fig2a



tiff("sup\_fig2a", width = 4, height = 4, units = 'in', res = 300)  
plot(sup\_fig2a+theme\_tufte() + theme(axis.line = element\_line(size = 1, colour = "black"))+ theme(legend.position = c(.95, .35),legend.justification = c("right", "top"))) + xlab(expression(bolditalic("Infection type"))) + ylab( expression (paste (bold("log10 "), bolditalic("Sodalis"), bold(" copy number"))))  
dev.off()

## png   
## 2

model1<-glm(log\_copy ~ Sample, data = Gmm)  
summary(model1)

##   
## Call:  
## glm(formula = log\_copy ~ Sample, data = Gmm)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.05891 -0.29748 0.07396 0.30252 1.12396   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 6.21604 0.06579 94.478 <2e-16 \*\*\*  
## SampleC -0.16712 0.09652 -1.731 0.0865 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.2294259)  
##   
## Null deviance: 22.942 on 98 degrees of freedom  
## Residual deviance: 22.254 on 97 degrees of freedom  
## AIC: 139.18  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: log\_copy  
## LR Chisq Df Pr(>Chisq)   
## Sample 2.998 1 0.08337 .  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#--------------------------------------------------------------------  
# supplementary figure 2A  
Gp <- subset(data\_sodqpcr, Species=="G.p")  
Gp

## Sample Species Country copy\_number\_corrected.per.fly log\_copy  
## 54 A G.p Eth 4105792.26 6.61  
## 55 A G.p Eth 3964434.78 6.60  
## 56 A G.p Eth 3185897.75 6.50  
## 57 A G.p Eth 2926772.25 6.47  
## 58 A G.p Eth 2956410.45 6.47  
## 59 A G.p Eth 3536825.20 6.55  
## 60 A G.p Ken 253637.59 5.40  
## 61 A G.p Ken 262660.71 5.42  
## 62 A G.p Ken 256278.50 5.41  
## 63 A G.p Ken 15725.73 4.20  
## 64 A G.p Ken 16857.07 4.23  
## 65 A G.p Ken 4972.94 3.70  
## 66 A G.p Ken 7221.39 3.86  
## 67 A G.p Ken 8997.20 3.95  
## 68 A G.p Ken 9233957.60 6.97  
## 69 A G.p Ken 8894524.80 6.95  
## 70 A G.p Ken 8139460.00 6.91  
## 71 A G.p Ken 752835.83 5.88  
## 72 A G.p Ken 833772.53 5.92  
## 73 A G.p Ken 728305.78 5.86  
## 74 A G.p Ken 1765650.25 6.25  
## 75 A G.p Ken 1968265.85 6.29  
## 76 A G.p Ken 1961504.95 6.29  
## 77 A G.p Ken 3549700.00 6.55  
## 78 A G.p Ken 3329111.50 6.52  
## 79 A G.p Ken 3151626.50 6.50  
## 80 A G.p Ken 962698.10 5.98  
## 81 A G.p Ken 1143055.77 6.06  
## 82 A G.p Ken 1191733.62 6.08  
## 83 A G.p Ken 1015960.30 6.01  
## 84 A G.p Ken 1205362.82 6.08  
## 85 A G.p Ken 1133481.14 6.05  
## 86 A G.p Ken 1472527.87 6.17  
## 87 A G.p Ken 1308940.95 6.12  
## 88 A G.p Ken 1281185.22 6.11  
## 89 A G.p Ken 4105627.56 6.61  
## 90 A G.p Ken 3459869.64 6.54  
## 91 A G.p Ken 3122746.02 6.49  
## 92 A G.p Ken 953219.87 5.98  
## 93 A G.p Ken 1385815.69 6.14  
## 94 A G.p Ken 1019450.62 6.01  
## 95 A G.p Ken 3010949.92 6.48  
## 96 A G.p Ken 3137601.25 6.50  
## 97 A G.p Ken 3015783.94 6.48  
## 98 A G.p Ken 29382.30 4.47  
## 99 A G.p Ken 32657.98 4.51  
## 100 A G.p Ken 27542.41 4.44  
## 101 A G.p Ken 1130434.50 6.05  
## 102 A G.p Ken 1071464.00 6.03  
## 103 A G.p Ken 1115442.00 6.05  
## 104 A G.p Ken 1987645.10 6.30  
## 105 A G.p Ken 2014324.90 6.30  
## 106 A G.p Ken 1922851.30 6.28  
## 107 A G.p Ken 1427522.32 6.15  
## 108 A G.p Ken 1666099.34 6.22  
## 109 A G.p Ken 1353322.67 6.13  
## 110 A G.p Tan 1446373.96 6.16  
## 111 A G.p Tan 1610826.54 6.21  
## 112 A G.p Tan 1561400.90 6.19  
## 113 A G.p Tan 1518448.88 6.18  
## 114 A G.p Tan 1925225.12 6.28  
## 115 A G.p Tan 1662840.76 6.22  
## 116 A G.p Tan 81575.76 4.91  
## 117 A G.p Tan 96277.70 4.98  
## 118 A G.p Tan 98279.91 4.99  
## 119 A G.p Tan 952425.25 5.98  
## 120 A G.p Tan 1186677.01 6.07  
## 121 A G.p Tan 1273054.06 6.10  
## 122 A G.p Tan 1088968.62 6.04  
## 123 A G.p Tan 1194766.35 6.08  
## 124 A G.p Tan 1155760.12 6.06  
## 125 A G.p Tan 1828842.13 6.26  
## 126 A G.p Tan 1987235.76 6.30  
## 127 A G.p Tan 1811666.91 6.26  
## 128 A G.p Tan 1053273.92 6.02  
## 129 A G.p Tan 3315587.63 6.52  
## 130 A G.p Tan 1656557.58 6.22  
## 131 A G.p Tan 661127.46 5.82  
## 132 A G.p Tan 768632.08 5.89  
## 133 A G.p Tan 684498.03 5.84  
## 134 A G.p Tan 1811973.66 6.26  
## 135 A G.p Tan 1956220.20 6.29  
## 136 A G.p Tan 2317824.54 6.37  
## 137 A G.p Tan 909065.20 5.96  
## 138 A G.p Tan 1013218.39 6.01  
## 139 A G.p Tan 1032482.08 6.01  
## 140 A G.p Tan 1063799.07 6.03  
## 141 A G.p Tan 565663.17 5.75  
## 142 A G.p Tan 1195693.09 6.08  
## 143 A G.p Tan 1336170.69 6.13  
## 144 A G.p Tan 624448.61 5.80  
## 145 A G.p Tan 460994.06 5.66  
## 146 A G.p Tan 474771.75 5.68  
## 147 A G.p Tan 471792.79 5.67  
## 148 A G.p Tan 543356.45 5.74  
## 149 A G.p Tan 462562.66 5.67  
## 150 A G.p Tan 468385.63 5.67  
## 151 A G.p Tan 800831.26 5.90  
## 152 A G.p Tan 860329.81 5.93  
## 153 A G.p Tan 1046502.69 6.02  
## 154 A G.p Tan 1901818.67 6.28  
## 155 A G.p Tan 2063108.97 6.31  
## 156 A G.p Tan 2297758.73 6.36  
## 203 C G.p Ken 718805.85 5.86  
## 204 C G.p Ken 725343.15 5.86  
## 205 C G.p Ken 599202.98 5.78  
## 206 C G.p Ken 677917.76 5.83  
## 207 C G.p Ken 637347.20 5.80  
## 208 C G.p Ken 643047.98 5.81  
## 209 C G.p Ken 880761.89 5.94  
## 210 C G.p Ken 988591.31 6.00  
## 211 C G.p Ken 767819.86 5.89  
## 212 C G.p Ken 916317.90 5.96  
## 213 C G.p Ken 1005044.48 6.00  
## 214 C G.p Ken 1078852.43 6.03  
## 215 C G.p Ken 739683.64 5.87  
## 216 C G.p Ken 695705.76 5.84  
## 217 C G.p Ken 682878.87 5.83  
## 218 C G.p Ken 631131.07 5.80  
## 219 C G.p Ken 641502.40 5.81  
## 220 C G.p Ken 566131.46 5.75  
## 221 C G.p Ken 1015118.40 6.01  
## 222 C G.p Ken 1094571.76 6.04  
## 223 C G.p Ken 947443.84 5.98  
## 224 C G.p Ken 204534.77 5.31  
## 225 C G.p Ken 280568.34 5.45  
## 226 C G.p Ken 165776.91 5.22  
## 227 C G.p Ken 2924446.34 6.47  
## 228 C G.p Ken 2826128.98 6.45  
## 229 C G.p Ken 2171559.77 6.34  
## 230 C G.p Ken 897908.45 5.95  
## 231 C G.p Ken 898818.18 5.95  
## 232 C G.p Ken 973113.21 5.99  
## 233 C G.p Ken 1059270.91 6.03  
## 234 C G.p Ken 977397.96 5.99  
## 235 C G.p Ken 1060751.81 6.03  
## 236 C G.p Ken 2808715.95 6.45  
## 237 C G.p Ken 2968453.35 6.47  
## 238 C G.p Ken 2803391.37 6.45  
## 239 C G.p Ken 332666.77 5.52  
## 240 C G.p Ken 321241.25 5.51  
## 241 C G.p Ken 320209.27 5.51  
## 242 C G.p Ken 1200292.42 6.08  
## 243 C G.p Ken 971056.86 5.99  
## 244 C G.p Ken 908298.93 5.96  
## 245 C G.p Ken 2279974.49 6.36  
## 246 C G.p Ken 1883112.09 6.27  
## 247 C G.p Ken 1932719.89 6.29  
## 248 C G.p Ken 194752.82 5.29  
## 249 C G.p Ken 184438.27 5.27  
## 250 C G.p Ken 179193.58 5.25  
## 251 C G.p Tan 1210058.85 6.08  
## 252 C G.p Tan 1282992.80 6.11  
## 253 C G.p Tan 1551156.03 6.19  
## 254 C G.p Tan 1241956.64 6.09  
## 255 C G.p Tan 1661873.21 6.22  
## 256 C G.p Tan 1736841.36 6.24  
## 257 C G.p Tan 983613.85 5.99  
## 258 C G.p Tan 1210460.94 6.08  
## 259 C G.p Tan 1431819.79 6.16  
## 260 C G.p Tan 1293304.16 6.11  
## 261 C G.p Tan 1746187.17 6.24  
## 262 C G.p Tan 1950091.85 6.29  
## 263 C G.p Tan 1641382.66 6.22  
## 264 C G.p Tan 1549406.98 6.19  
## 265 C G.p Tan 1484065.92 6.17  
## 266 C G.p Tan 537760.05 5.73  
## 267 C G.p Tan 605603.38 5.78  
## 268 C G.p Tan 657568.48 5.82  
## 269 C G.p Tan 599201.28 5.78  
## 270 C G.p Tan 699494.40 5.84  
## 271 C G.p Tan 517363.20 5.71  
## 272 C G.p Tan 708694.56 5.85  
## 273 C G.p Tan 858284.28 5.93  
## 274 C G.p Tan 854924.70 5.93  
## 275 C G.p Tan 333963.04 5.52  
## 276 C G.p Tan 359125.40 5.56  
## 277 C G.p Tan 270383.12 5.43  
## 278 C G.p Tan 528792.52 5.72  
## 279 C G.p Tan 590464.75 5.77  
## 280 C G.p Tan 648716.88 5.81  
## 281 C G.p Tan 269764.32 5.43  
## 282 C G.p Tan 281597.65 5.45  
## 283 C G.p Tan 298947.26 5.48  
## 284 C G.p Tan 3249.22 3.51  
## 285 C G.p Tan 5522.06 3.74  
## 286 C G.p Tan 7960.32 3.90  
## 287 C G.p Tan 8036502.48 6.91  
## 288 C G.p Tan 7169820.84 6.86  
## 289 C G.p Tan 7373359.71 6.87  
## 290 C G.p Tan 1951057.33 6.29  
## 291 C G.p Tan 1641346.31 6.22  
## 292 C G.p Tan 1720707.21 6.24  
## 293 C G.p Tan 5444975.94 6.74  
## 294 C G.p Tan 4577024.47 6.66  
## 295 C G.p Tan 3491578.15 6.54  
## 296 C G.p Tan 2068.34 3.32  
## 297 C G.p Tan 3294.06 3.52  
## 298 C G.p Tan 1215.40 3.08

sup\_fig2a<-ggplot(Gp,aes(x=Sample ,y=log\_copy, fill=Sample)) +  
 geom\_boxplot() + geom\_jitter(width=0.1,alpha=0.2)+ ylim(0, 8)  
  
model1<-glm(log\_copy ~ Sample, data = Gp)  
summary(model1)

##   
## Call:  
## glm(formula = log\_copy ~ Sample, data = Gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7415 -0.0785 0.1185 0.3365 1.0885   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.96350 0.06583 90.594 <2e-16 \*\*\*  
## SampleC -0.14204 0.09477 -1.499 0.136   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.4463103)  
##   
## Null deviance: 88.926 on 198 degrees of freedom  
## Residual deviance: 87.923 on 197 degrees of freedom  
## AIC: 408.19  
##   
## Number of Fisher Scoring iterations: 2

tiff("sup\_fig2a", width = 4, height = 4, units = 'in', res = 300)  
plot(sup\_fig2a+theme\_tufte() + theme(axis.line = element\_line(size = 1, colour = "black"))+ theme(legend.position = c(.95, .35),legend.justification = c("right", "top"))) + xlab(expression(bolditalic("Infection type"))) + ylab( expression (paste (bold("log10 "), bolditalic("Sodalis"), bold(" copy number"))))  
dev.off()

## png   
## 2

model1<-glm(log\_copy ~ Sample, data = Gp)  
summary(model1)

##   
## Call:  
## glm(formula = log\_copy ~ Sample, data = Gp)  
##   
## Deviance Residuals:   
## Min 1Q Median 3Q Max   
## -2.7415 -0.0785 0.1185 0.3365 1.0885   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) 5.96350 0.06583 90.594 <2e-16 \*\*\*  
## SampleC -0.14204 0.09477 -1.499 0.136   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## (Dispersion parameter for gaussian family taken to be 0.4463103)  
##   
## Null deviance: 88.926 on 198 degrees of freedom  
## Residual deviance: 87.923 on 197 degrees of freedom  
## AIC: 408.19  
##   
## Number of Fisher Scoring iterations: 2

Anova(model1)

## Analysis of Deviance Table (Type II tests)  
##   
## Response: log\_copy  
## LR Chisq Df Pr(>Chisq)  
## Sample 2.246 1 0.134